How has Japan responded to the March 2011 disaster? What changes have been made in key domestic policy areas?

The triple disaster that struck Japan in March 2011 began with the most powerful earthquake known to have hit Japan and led to tsunami reaching 40 meters in height that devastated a wide area and caused thousands of deaths. The ensuing accident at the Fukushima-Daiichi nuclear power plant was Japan’s worst and only second to Chernobyl in its severity.

But has this triple disaster also changed Japan? Has it led to a transformation of the country, a shift in how Japan functions? This book, with fresh perspectives on extraordinary events written by diplomats and policy experts at European embassies to Japan, explores subsequent shifts in Japanese politics and policy-making to see if profound changes have occurred or if instead these changes have been limited. The book addresses those policy areas most likely to be affected by the tragedy – politics, economics, energy, climate, agriculture and food safety – describes how the sector has been affected and considers what the implications are for the future.
AFTER THE GREAT EAST JAPAN EARTHQUAKE
ASIA INSIGHTS

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POLITICAL AND POLICY CHANGE IN POST-FUKUSHIMA JAPAN

Edited by
Dominic Al-Badri and Gijs Berends
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Preface

The earthquake, tsunami and nuclear incident which shook Japan on 11 March 2011 collectively caused a crisis of a proportion that no other country has experienced in the modern era outside of wartime. The ramifications of that day’s events will reverberate throughout the rest of the decade and further into the years beyond. As we write this preface, almost two years after the triple disaster hit northeast Japan, the policy implications are becoming clearer, and we hope that this volume will assist in a deeper understanding of what this might mean for Japan.

The contributors to this book were all resident in Tokyo on 11 March 2011 while working as political or policy analysts at European diplomatic missions in Japan. As such, we had a personal and professional interest in trying to understand what the crisis meant both for the country and for our respective policy fields. We hope that the reader will agree that publishing a work at this remove from the triple disaster has allowed enough time for the dust to settle along the Pacific coastline of Japan and for its repercussions to become more sharply defined. As this book is concerned with politics and policy issues, which tend to develop in incremental steps, we preferred to let a certain amount of time pass to allow more of the disasters’ impact to reveal itself rather than producing a hasty work that would have been too tentative in nature. Yet, we also appreciate that we are still dealing with contemporary events and that subsequent political and policy decisions may well have an impact on what we present here. After all, some of the institutional and political ramifications remain unclear.

The book’s rationale is one of looking at a number of policy areas to try to identify what has and what has not changed as a result of the Great East Japan Earthquake, tsunami, and ensuing Fukushima-Daiichi nuclear power station crisis. We have selected those policy fields that were most affected by the crisis, and we have attempted to analyse whether these are the policies that have subsequently been overhauled or altered in some manner. The book begins with a scene-setter that briefly paints
a picture of Japan as it was in the period prior to the traumatic events of 11 March 2011. Following this, two chapters look at the events on and immediately after that momentous day, and at the domestic political arena. Five chapters then follow that seek to analyse developments in key policy areas – economic and fiscal policy, energy, environment, agriculture, and food safety – ahead of a final chapter in which we present our conclusions.

Consequently, this book will be about ‘hard’ policy areas rather than about wider changes within Japanese society, although some aspects of the latter will be mentioned in context. There are already several good sources of writing on the impact of the events of 11 March on Japanese society which we suggest may be of further interest.¹

In the writing of this book, we have stuck to a simple and straightforward analytical framework. Without tying ourselves into a straightjacket, as contributors we have studied the direct impact on our respective fields of expertise. We then go back in time and summarise the political and policy status before the events. After this, we try to analyse whether policies have been modified in the wake of the crisis or whether deeper systemic changes have taken place, whereby new structures or institutions have been created or competences rearranged.

We have also upheld a few basic rules throughout the book. We have allowed for some overlap between chapters in the hope that each can serve as a stand-alone chapter for the reader whose interest in Japan is of a specialist nature. We present financial amounts only in yen, but note that exchange rates against the euro in the post-2007 period have ranged from €1 = ¥169.75 in July 2008 to €1 = ¥94.2 in July 2012, and that the Japanese fiscal year runs from the start of April to the end of the following March. All Japanese names are given in Western style, with given name first followed by family name.

Where possible, and where the information being cited is available in both English and Japanese, we have for the sake of the non-Japanese speaking reader chosen English sources over Japanese ones. Where this was not feasible we have alerted the reader in the footnotes that the source is only available in Japanese. One thing about footnotes and

citations is perhaps worth mentioning. While there is a considerable amount of cross-referencing, this is not strictly an academic work as the contributors are all policy professionals rather than scholars, and deal with the policy issues and documents discussed in this volume on a regular basis as part of the working environment. Accordingly, a substantial amount of information used is the result of day-to-day interactions with Japanese interlocutors. We have, however, striven to ensure that key and otherwise important references are noted appropriately.

Naturally, the views expressed in this work are those of the authors alone and do not necessarily correspond to those of the European Commission, the European External Action Service, or the British or Dutch governments.

This book has been timed to appear around the second anniversary of the triple disaster. We would like to express our condolences to those bereaved by the events of 11 March 2011, as well as pay tribute to the courage of those working in the damaged nuclear power plants, the equanimity of the many millions under duress in east and northeast Japan in the weeks and months that followed, and all those whose lives or livelihoods have somehow been affected. We also acknowledge the anxiety that accompanied the national sense of incredulity at the level of destruction along the Pacific coast of northeast Japan. Any royalties that may accrue from the sale of this work will be donated to one or more NGOs or charities operating in the devastated Tohoku region.

Finally, we would like to thank Ambassador of the EU to Japan, Hans Dietmar Schweisgut, and at NIAS Press editor in chief Gerald Jackson and senior editor Leena Höskuldsson for their support, encouragement and advice during the preparation of this book. We would also like to thank the three anonymous reviewers who took the time to read the manuscript. Acknowledgements for individual chapters are indicated at the beginning of each chapter.

Dominic Al-Badri and Gijs Berends
Tokyo, February 2013
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CARLA BOONSTRA graduated from Leiden University with a master’s degree in Japanese language and culture. As part of her degree, she studied Japanese at the Nanzan University in Nagoya. After graduation she started working at the Japanese Embassy in the Netherlands. In 1997 she entered the Dutch Ministry of Agriculture, Nature & Food Quality where she was responsible for EU Common Agricultural Policy and Trade policy/WTO. From 1997 to 2000, and again from 2007 to 2012, Ms. Boonstra was posted to the Embassy of the Kingdom of the Netherlands in Tokyo, latterly as head of the department for agriculture, nature & food quality.
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Abbreviations

ACNRE  Advisory Committee for Natural Resources and Energy
AFF       Agriculture and Food Frontier
ASDF     Air Self-Defense Force
BOJ      Bank of Japan
CAA      Consumer Affairs Agency
CCS      Carbon capture and storage
CEC      Central Environment Council
COOP     Consumers’ co-operative
CRR      Council for the Realization of the Revival of the Food, Agriculture, Forestry and Fisheries Industries
CSR      Corporate social responsibility
DPJ      Democratic Party of Japan
EEC      Energy and Environment Council
EMEC     European Marine Energy Centre
ETS      Emissions trading scheme
FIT      Feed-in tariff
FSC      Food Safety Commission
FY       Fiscal year
GDP      Gross domestic product
GHG      Greenhouse gas
IAEA     International Atomic Energy Agency
ICANPS   Investigation Committee on the Accident at the Fukushima Nuclear Power Stations
INES     International Nuclear and Radiological Event Scale
JA       Japan Agricultural Co-operative
JGB      Japanese Government Bond
LDP      Liberal Democratic Party
<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Full Form</th>
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<tbody>
<tr>
<td>LNG</td>
<td>Liquefied Natural Gas</td>
</tr>
<tr>
<td>MAFF</td>
<td>Ministry of Agriculture, Forestry and Fisheries</td>
</tr>
<tr>
<td>METI</td>
<td>Ministry of Trade, Economy and Industry</td>
</tr>
<tr>
<td>MEXT</td>
<td>Ministry of Education, Culture, Sports, Science and Technology</td>
</tr>
<tr>
<td>MHLW</td>
<td>Ministry of Health, Labour and Welfare</td>
</tr>
<tr>
<td>MP</td>
<td>Member of Parliament</td>
</tr>
<tr>
<td>NAIIC</td>
<td>Fukushima Nuclear Accident Independent Investigation Committee</td>
</tr>
<tr>
<td>NEDO</td>
<td>New Energy and Industrial Technology Development Organisation</td>
</tr>
<tr>
<td>NGO</td>
<td>Non-governmental organisation</td>
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<tr>
<td>NIES</td>
<td>National Institute of Environment Studies</td>
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<td>NISA</td>
<td>Nuclear and Industrial Safety Agency</td>
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<tr>
<td>NRA</td>
<td>Nuclear Regulation Authority</td>
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<tr>
<td>NRC</td>
<td>Nuclear Regulatory Commission <em>(United States)</em></td>
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<tr>
<td>NSC</td>
<td>Nuclear Safety Commission</td>
</tr>
<tr>
<td>ODA</td>
<td>Official development assistance</td>
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<tr>
<td>OECD</td>
<td>Organisation for Economic Co-operation and Development</td>
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<tr>
<td>PM</td>
<td>Prime Minister</td>
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<tr>
<td>RDC</td>
<td>Reconstruction Design Council in Response to the Great East Japan Earthquake</td>
</tr>
<tr>
<td>SDF</td>
<td>Self-Defense Forces</td>
</tr>
<tr>
<td>SPEEDI</td>
<td>System for Prediction of Environmental Emergency Dose Information</td>
</tr>
<tr>
<td>TEPCO</td>
<td>Tokyo Electric Power Co.</td>
</tr>
<tr>
<td>TPP</td>
<td>Trans-Pacific Partnership</td>
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<td>WTO</td>
<td>World Trade Organisation</td>
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Figure 0.1: Map of Japan
Figure 0.2: Prefectures of Japan
CHAPTER ONE

Setting the scene: Japan as the 21st century began

Dominic Al-Badri and Gijs Berends

On 30 December 2009, the Nikkei index closed at 10,546, down 73% from its historic 38,916 peak 20 years earlier, and as the first decade of the 21st century drew to a close Japan appeared to be living in anxious times.1 From over-the-top media-fuelled reactions over a batch of tainted Chinese dumplings and concern at erratic stock-market activity, and from repeated high-profile administrative errors to frustration at the mainstream political system, there was a widespread feeling that something was not quite right in the country.

Or at least that was one way of perceiving things. Scratch society’s surface or move away from the media headlines and it was also evident that a number of important social changes were taking place as well, such as the growth of NGOs and reforms to the judiciary. Japan remained one of the world leaders in the field of science and technology, with a widespread awareness of the need for continued high levels of expenditure on research and development. It was also sometimes easy to overlook the fact that Japan was one of only two stable and prosperous democracies in a corner of the world where Cold War tensions had not entirely dissipated. And although Japan remained incapable of projecting its power like a ‘normal’ country, in the first years of the new millennium Japanese administrations had begun to stretch the limits of the country’s ‘pacifist’ constitution by sending Self-Defense Forces first to Iraq, and then later to the Indian Ocean and the Gulf of Aden, military deployments that would have been simply unthinkable fifteen years earlier.2

2. For more on societal changes in Japan, see particularly the excellent Japan’s Quiet Transformation by Jeff Kingston, RoutledgeCurzon, 2004.
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Much then depended on how one chose to look at Japan, and much of the global media chose to view Japan through an economic lens. After all, this was a country that at one stage had been all set to be ‘number one’, on the cusp of establishing impassable benchmarks in terms of economic development, high-tech creativity and manufacturing prowess. But the economic bubble of the 1980s had burst by the start of the 1990s and that decade had become commonly, and somewhat lazily, known as Japan’s ‘lost decade’. (Some contend that this lost decade stretched well into the first years of the 21st century.)

A sign of Japan’s societal evolution comes with the realisation that the once common aphorism proclaiming Japan ‘as the only country where socialism has ever worked’ is rarely heard these days. Rather than implying that the nation was a workers’ paradise, the socialism referred to was closer in spirit to older pre-Marxist utopian socialist philosophies. Post-World War II, Japanese had been proud to live in a country where nearly everyone was middle class and conformed to the same values. But as the after-effects of the collapse of the 1980s economic bubble slowly worked their way through society it became clear that this belief was fraying. A February 2008 joint poll between the BBC and Japan’s largest-circulation newspaper, the Yomiuri Shimbun, found that a hefty 84% of the population was all too aware of, and dissatisfied with, the nation’s economic disparity.3

Shortly after, however, Ferrari announced that it would be taking over its Japanese subsidiary on 1 July ‘in an effort to cash in on the growing Japanese luxury market’. The announced sales were up nearly 39%, comparing favourably with Aston Martin and Maserati, which could only notch up more modest increases of around 20%.4 But domestic sales by Toyota declined 6% in 2007, the first time Japan’s leading automaker had failed to make the 1.6-million-unit threshold of domestic annual sales since 1983.5

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And therein lay the rub: while Tokyo remained relatively prosperous in spite of global economic uncertainty, once bustling prefectural capitals such as Tottori and Miyazaki showed the other side of the coin. In Tottori, station-front shopping arcades that had been thriving in the early 1990s had the shutters up fifteen years later, while in Miyazaki crumbling seaside resort hotels looked like the remains of a ghost town. These were just two unhappy memorials of the boom-time bubble years of the 1980s that could be easily replicated in other smaller provincial cities and towns across the country.

Although the Japanese economy had managed to pick up slightly during the 2003–07 period, with the economy chugging along with a 2+% growth rate year on year, the role of exports in the economy had steadily increased during the expansion, fuelled by an undervalued yen. (As a global currency, the yen had also seen its share of world currency reserves decline from 6.1% in 2000 to 3.8% in 2010.) This left the economy vulnerable to the consequences of not only a global economic slowdown, but also to sharp rises in the price of oil and other commodities on which Japan continues to depend heavily. By March 2009, 75% of Japanese were reporting that they had been affected to some extent by rising food prices, and 90% believed that some sort of changes were needed to the national economic system. There was additional disquiet when China overtook Japan as the world's second largest economy in 2010.6

Japan’s main trading partners are China, the United States, the European Union, South Korea, Australia and Thailand, clearly revealing the increasing importance of Asia in addition to its historical trading partner, the US. Japan had begun talks with the EU with an eye to eventually concluding a trade agreement, and the Japanese government adopted new trade policy guidelines in November 2010. Despite criticism from within his own party, in 2010 Prime Minister Naoto Kan also tied his flag to the more controversial trade initiative known as the Trans-Pacific Partnership to which he hoped Japan could accede.7

The national debt at the end of FY 2011 stood at a record ¥924 trillion – a per capita figure of about ¥7.3 million. Japan’s debt-to-GDP ratio was 215% by the end of 2009, and if interest rates eventually rise, financing this debt load will become increasingly difficult. Already, one-fifth of the Japanese budget is spent simply servicing the debt.\(^8\)

Similarly, discussion of the tax reforms necessary to balance the budget was relatively low-key during the decade, even though economists across the board kept opining that increasing the consumption tax from the 5% level was a pressing issue.\(^9\) The incumbent Liberal Democratic Party (LDP) did include a pledge to increase the tax in its policy platform ahead of the August 2009 Lower House elections, but it lost those elections in a historic manner to the Democratic Party of Japan (DPJ) for a variety of reasons, and the consumption tax was not really a key issue. It was the DPJ’s second prime minister, Naoto Kan, who brought the consumption-tax-increase issue back into the political mainstream in 2010. However, critics alleged that the manner in which he did so was a key factor in the DPJ’s poor performance in the July 2010 Upper House elections.

One bright spot for some regional economies has been an upswing in tourism as tourists – wealthier Asians for the most part – came to Japan to visit hot spring and skiing resorts, and go on shopping sprees. Japan lags behind European nations in terms of ‘tourism competitiveness’ (2011 World Economic Forum ranking: 22), but it still received a record 8.34 million foreign tourists in 2007, over 30% of whom were South Korean with slightly fewer from China and Taiwan. Although this figure dropped due to global economic uncertainty in 2009, it rebounded in 2010 to a new record of 8.61 million, double the figure of 12 years previously.\(^10\)

Prior to the triple disaster of March 2011, and with the exception of 2009, it had been obvious that the number of foreigners visiting Japan was steadily increasing year on year while Japanese overseas travel

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9. The issue of increasing the consumption tax has a long, sometimes controversial history in Japan and has been a pet goal of the Ministry of Finance since the 1980s.
patterns appeared to be influenced by the relative strength of the yen vis-à-vis other currencies. However, in the past several years there has been a noticeable decline in the number of people, pro rata, in their twenties heading overseas, particularly men, leading to fears of further introspection in a society where this trait is already close to being a national pastime. Concerns about Japanese youth are not confined to opinion-makers: polls have shown that barely a third of the country agrees with the idea of lowering Japan's age of majority from the current 20 to the Western norm of 18, saying Japanese youth is too immature to act responsibly.¹¹

The contrasting images of city and country life mentioned earlier are evidence of the uneven medium-term economic recovery following the collapse of the 1980s 'bubble', but also reveal truths about the continuing ageing of society and the anticipated shrinking of the population. Of the 128 million people in Japan (as of 2010), just 16.8 million were under 14 or under, a number that is set to fall to 13.2 million in 2020. (In comparison, those aged 65 or over will number 35.9 million in 2020.) By 2030, Japan will have fewer than two working-age people for every retiree.¹²

How to deal with an ageing society remains a complicated issue: one oft-touted solution of getting more women and robots involved in the workplace partially masks the fear of discussing immigration, a controversial subject in a country with a strong island identity, and one that few politicians have so far had the stomach to tackle.¹³ Getting robots to do some of the work would certainly tap into the country’s deep reserves of technological know-how, but the relative paucity of childcare facilities for working mothers is one of the issues that has to be addressed before more women can enter the workforce.

And then there is the issue of the ageing farming sector: the percentage of farmers over 65 is 50% higher than those who are between the

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¹³ See e.g. Kiyoshi Takenaka’s article for Reuters ‘Japan parties shun immigration debate before poll,’ 8 July 2010, http://in.reuters.com/article/2010/07/08/idINIndia-49967220100708. A small group within the LDP did make a pro-immigration proposal in June 2008 ‘Nihongata imin seisaku no teigen’ but it seems to have made little headway within the wider party (http://www.kouenkai.or.jp/st/pdf/iminseisaku080612.pdf). Former Justice Ministry official Hidenori Sakanaka is another voice calling for more debate on the issue and he set up the Japan Immigration Policy Institute (http://www.jipi.or.jp) to try to promote his views.
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ages of 15 and 64. The average age of farm workers in Japan in 2011 was already close to 66, the elderly especially concentrated in the rice-cultivation sector. The problems ahead for Japan’s agricultural sector tie in with something else that causes much gnashing of teeth across the country: food safety and food self-sufficiency, issues that will be looked at in two of the book’s chapters. A string of domestic food scandals in 2007–09 continually fed public unease. Tales of convenience store products on sale past their expiry date, famous restaurants and retailers passing off mutton dressed as lamb, and a scare over made-in-China gyōza (dumplings) all became fodder for prime-time TV shows.¹⁴

The dodgy-dumplings incident was particularly troubling as it was hyped out of proportion by the media; by the time it became known that only about ten people had fallen ill the damage had already been done. Manufacturers apologised on TV, announcing frozen food product recalls and some supermarkets even erected signs stating that certain displays were free of China-sourced food products. Frozen-food sales slumped, three-quarters of Japanese polled said they never wanted to have anything to do with Chinese food products ever again, and the nation’s food self-sufficiency, or lack thereof, again became a prime topic for discussion.¹⁵

The increase in imported Chinese food products had begun in earnest in the mid-1990s as the effects of the post-‘bubble’ slump started to be felt. The same period has seen an increase in the ‘working poor’ – those in employment, but only just, working either part-time or on temporary contracts. Accounting for about 35% of the workforce, these workers often suffer discriminatory conditions compared with ‘regular’ employees in terms of pay, social protection and training, resulting in depressed wages, which in any case fell in nominal terms nearly every year in the 2000–10 decade, from ¥4.61 million in 2000 to ¥4.12 million in 2010.¹⁶

Some of the increase in this low-end employment can be traced to the mushrooming of brightly lit, 24-hour convenience stores. If there isn’t a convenience store in the neighbourhood, there is one of Japan’s

¹⁵. On a calorie base Japan’s food self-sufficiency rate has slumped to 39% (2010 figures), the lowest level of food self-sufficiency amongst the industrialised nations, down from 73% in 1965: Shokuryō jikyuritsu, http://www.maff.go.jp/j/tokei/sihyo/data/02.html.
SETTING THE SCENE: JAPAN AS THE 21ST CENTURY BEGAN

2.53 million energy-guzzling drinks-vending machines: hot drinks in the winter, cold drinks in the summer. Along with the 3.83 million other vending machines, which dispense anything from newspapers to batteries to lobsters and bottles of Scotch, the amount of electricity required for this 24/7 convenience is 6.6 billion kWh, equivalent to the amount of electricity produced from all renewable energy sources in Belgium in 2010.17

Developing renewable energy sources would appear to many to be one way for Japan to ensure its energy security given that a shortage of natural resources has been problematic for the country in the modern era; indeed the need to secure oil supplies was one reason for Japan’s expansion into Southeast Asia in 1941, and the country remains heavily dependent on imports of LNG, oil and coal. (Japan’s domestic coal output peaked in the 1960s.) And yet, other than hydroelectric power, Japan has been rather a slow starter in tapping into the renewable energy field.18

Atomic energy has been a different matter however, notwithstanding the atom bombs dropped on Hiroshima and Nagasaki in 1945. Japan’s relationship with nuclear power generation dates back as far as 1955 and the enactment of the Atomic Energy Basic Act in December that year, but it was not until the 1970s that light-water reactors began becoming operational in increasing numbers. The 1973 oil shock – and to a lesser extent the subsequent one of 1980 – had a huge impact on Japan, leading companies to move away from cheap oil and promote energy-saving and energy-efficient measures and products. Similarly, the government introduced policies designed to facilitate this while also seeking to diversify energy sources. In 2010, the Ministry of Economy, Trade and Industry again tweaked the national strategic energy plan as it sought to raise its energy independence ratio over a 20-year period to about 70% from the then 38%. While some attention was given to the promotion of


When it comes to global warming, Japan has demonstrated progress in fields in which it has been strong by tradition: cars, electronics, manufacturing processes, information technology. But it has been a bit slower on the uptake regarding more modern or innovative ways to fight climate change such as green procurement, emissions trading, carbon taxes, feed-in tariffs, and energy-efficient housing. Business has tended to be sceptical of these instruments and the government similarly appeared to side with the reluctant entrepreneurs. This changed with the landslide victory in the 2009 Lower House elections, as the DPJ singled out climate change as a flagship policy in an effort to show that it represented a new political attitude. Without consulting the ministries and taking no note of business trepidation, the first DPJ prime minister, Yukio Hatoyama, promised to reduce emissions in Japan by 25\% from 1990 levels. This seemed to put Japan squarely at the forefront of the countries responding to climate change. But even before 11 March 2011, the support for this ambition had started to wane and the proposed policy instruments to meet this target proved unpopular.

Nonetheless, Japanese firms remain well placed to benefit from any kind of shift towards renewable-energy technology. Research and development expenditure by Japanese companies, universities and public research institutions hit a record ¥18.94 trillion in FY 2007. Even if that figure has since dropped following the global economic downturn it still stood at ¥17.1 trillion in FY 2010, which as a ratio of GDP is an impressive 3.57\% (higher than other key developed nations such as the US, South Korea, Germany and France) with more than 70\% of the funds coming from the private sector.\footnote{\textit{Heisei 23-nen R\&D kagakujijutsukenyûchôsa, Kekka no gaikan}, p.3, http://www.stat.go.jp/data/kagaku/2011/pdf/23ke_gai.pdf and \textit{\textquoteleft R\&D Heisei 23-nen kagakujijutsukenkyûchôsakekka\textquoteright}, p. 3, http://www.stat.go.jp/data/kagaku/2011/pdf/23youyak.pdf.}

Ground-breaking achievements in recent years include the production of stem cells from human skin, which points the way forward to new treatments for spinal cord injuries and Alzheimer’s disease (and

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avoids the ethical issues that surround the use of human eggs). Japan also remains a world leader in the field of nanotechnology as well in its traditional industrial sectors (hybrid cars), and is home to more than a quarter of the world’s industrial robots.21

Japan’s political system, the challenges it faced from the second half of the decade onwards, and how it performed following the tragic events of 11 March 2011 will be more fully expounded upon in Chapter 3. But it is safe to say that both foreign observers and most Japanese alike had similar thoughts regarding the domestic political situation in the 2006–09 period during which successive Japanese administrations under an LDP-led coalition lost the confidence of much of the electorate for a variety of reasons, some self-inflicted, others simply unfortunate. The DPJ’s landslide election victory in the summer of 2009 initially suggested a significant change in the direction Japan’s politics was heading, but things did not transpire in the manner that the party had hoped to the point where there were striking similarities between the political set-up of early 2012 and that of summer 2009.

In conclusion, Japan as it stood two decades or so after the end of its economic ‘miracle’ was a country that showed remarkable resilience in many areas, but one in which its administrators, businesspeople, politicians and citizens were simultaneously facing an array of challenges. The triple whammy on 11 March 2011 of the Great East Japan Earthquake, tsunami and ensuing Fukushima-Daiichi nuclear power station crisis would add enormously to the challenges the country was already facing, and in the chapters ahead we shall look at the immediate effects that the events of that momentous day had on several key sectors of Japanese policy-making.

CHAPTER TWO

The unfolding of the triple disaster

Mari Koseki¹

Rumbling earth, roaring sea

The rugged Pacific coastline of Japan’s Tohoku region, stretching some 700 km from the south-eastern tip of Aomori Prefecture in the north to Miyagi Prefecture in the south, was acclaimed for its proximity to one of the world’s richest fishing grounds. Fisheries and related industries, together with the tourism/hospitality sector that benefited from the raw beauty of the sawtooth ria coasts, formed the backbone of a regional economy threatened, like so much of contemporary rural Japan, with depopulation and a greying society.

However, triggered by the temblor now etched in history as the Great East Japan Earthquake, which struck at 2:46 pm on Friday, 11 March 2011, this bountiful sea sent forth towering tsunami that reached areas as high as 39.3 metres above sea level in the city of Miyako, Iwate Prefecture, the highest waves ever recorded in Japan.²

The earthquake’s epicentre was located 24 km below the seabed some 130 km east–southeast of the Ojika Peninsula in Miyagi Prefecture, at latitude 38.3N and longitude 142.9E. Measuring 9.0 on the Richter scale and a maximum 7 on the Japanese seismic intensity scale, it was the largest earthquake ever recorded in Japan, and prompted the Japan

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¹ The main sources for the factual information in this chapter are the major Japanese newspapers: Yomiuri Shimbun, Asahi Shimbun, Mainichi Shimbun, Sankei Shimbun, Tokyo Shimbun and the Nihon Keizai Shimbun. Explanations of events are solely based on those provided in the source material and do not rely on interpretations of events by any of this book’s contributors. Given the magnitude and scale of the Great East Japan Earthquake and subsequent events, this chapter is necessarily a summary of key developments, and does not reflect all details of this triple disaster.

² Report by a committee of the Japan Society of Civil Engineers (in Japanese): http://committees.jsce.or.jp/2011quake/system/files/%E6%B4%A5%E6%B3%A2%E6%8E%A8%E8%A8%88%E6%B8%9B%E7%81%BD%E6%A4%9C%E8%A8%8E%E5%A7%94%E5%93%A1%E4%BC%9A%E5%A0%B1%E5%91%8A%E6%9B%B8_1.pdf.
Meteorological Agency to issue a major tsunami warning all along the Pacific coast.\(^3\)

The earthquake and subsequent tsunami were the deadliest to strike Japan on record, and the figures paint a staggering picture of what was left behind when the waters finally receded: as of 31 October 2012, some 600 days later, 15,872 people had died across 12 prefectures stretching from Hokkaido in the north to Kanagawa, south of the capital Tokyo.\(^4\) Another 2,769 people have yet to be found.\(^5\) Police units have continued to comb areas along the coast, still looking for victims so that they may be returned to their loved ones.

National Police Agency figures give drowning as the cause of death for more than 90 per cent of the victims, underscoring the devastating power of the waves. To put the death toll into perspective, the Great Hanshin Earthquake of January 1995 that struck the western city of Kobe and environs resulted in 6,434 dead, with the largest percentage of them, around 80 per cent, crushed to death.\(^6\)

Of the fatalities in the March 2011 disaster, 15,801 were registered in the three worst-hit prefectures of Iwate, Miyagi and Fukushima along the northeast Pacific coast. In addition to the dead and missing, as many as 468,000 people had evacuated their homes as of 14 March, and some 1,600 children were orphaned by the twin disasters. Over 1.21 million homes and buildings were damaged, of which more than 130,000 homes were completely destroyed. A total of 561 km\(^2\) of land was inundated with seawater, and total economic damage has been estimated by the Cabinet Office at ¥16.9 trillion, close to double the ¥9.6 trillion of damage caused by the 1995 Great Hanshin Earthquake. Of this amount, some ¥2.4 trillion in damage has been estimated in the farming and fisheries industries.

Natural disasters are nothing new in Japan: it sits atop the so-called Pacific Ring of Fire. Records show that the Sanriku coast has fallen victim to major tsunami before: after the Meiji Sanriku Earthquake of 1896

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Figure 2.1: The tsunami ravaged entire cities and left behind apocalyptic landscapes

(M8.2), the Showa Sanriku Earthquake of 1933 (M8.1) and the Chile earthquake of 1960 (M9.5), which was so powerful that the tsunami it generated traversed the Pacific Ocean to reach Japanese shores. In some areas in the Tohoku region, these experiences had been passed down over the decades, with elders reminding the younger generation of the need to flee to high ground after a large earthquake. Sadly, such experience and knowledge proved to not be enough.

Initially, much of the media focus was on the earthquake and tsunami. Television repeatedly showed footage of black walls of water heaving over levees up and down the coast, gurgling up river estuaries and spreading grey fingers across the plains, knocking around cars, homes and even aeroplanes as if they were toys.

Less than ten minutes after the earthquake hit, the governor of Iwate Prefecture requested the dispatch of Ground Self-Defense Force (SDF) troops to assist in disaster relief. His request was soon echoed by his counterparts in three other prefectures: Miyagi, Fukushima and

7 Historically, Sanriku is the name of the region on the northeastern side of Honshu, Japan’s main island. In modern times, it generally refers to the coastline between the city of Hachinohe, Aomori Prefecture and the Ojika Peninsula in Miyagi Prefecture.
After the Great East Japan Earthquake

Aomori. In total some 8,000 Ground, Maritime and Air SDF personnel were deployed in response.

In the end, roughly 100,000 SDF personnel – the maximum number expendable – took part in the rescue, relief and reconstruction efforts in the weeks and months that followed, including those who were deployed to tackle the crisis at the Fukushima-Daiichi nuclear power plant. This was by far the largest operation ever for the SDF, and opinion polls have shown that the public’s respect for the forces has risen considerably as a result of their activities in responding to the triple disaster.

Sendai, the capital of Miyagi Prefecture and the largest city in the Tohoku region, suffered widespread blackouts, gas leaks and fires as a result of the earthquake. Some 4.4 million households in the area serviced by the Tohoku Electric Power Co. were without power as of 6:00 pm that day, while Sendai Airport suspended all services, and about an hour later found itself inundated by the waves.

The railway system, a key artery in the Tohoku region, was also badly damaged. As of 4 April, damage was reported at some 4,400 locations along its regular lines, as well as roughly 1,200 locations along its Tohoku bullet train line. In addition, about 1,680 places along the seven regular lines that suffered direct hits from the tsunami had been identified. Meanwhile, traffic-disrupting damage such as cracks and holes on roads had been confirmed on 20 routes and four interchanges.

The earth also shook in the capital, Tokyo, some 400 km away. In the sprawling megalopolis, however, chaos had ensued not from natural causes, but from the widespread impact the earthquake had on public transport – at the worst period, in the hours after the earthquake, some 62 lines on the Japan Rail network had suspended services, including some of the most frequently used lines in Tokyo. The city also saw services severely disrupted on private railway lines and the metro, ef-

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effectively preventing an estimated 5.15 million people from returning to their homes.12

The earthquake-tsunami may well also be remembered as one of the first examples of a natural disaster of this magnitude striking a developed country in the age of social media – not only media organisations but also private citizens were taking photographs and making videos of the carnage unfolding before their eyes, all along the coast.13 The images, often accompanied by the screams and wails of those fleeing around them, quickly made their way around the globe via such networks as Facebook and Twitter, at times faster than traditional media could air them.

Journalists were to find a treasure trove of human-interest stories in the aftermath – tales of loss, grief and anger; courage, solidarity and resilience. Some of these narratives have become so well known that they have since found their way into school textbooks and museums.

There would be few in the country who would not know about Miki Endo, the 24-year-old Minamisanriku town office employee who remains missing after the monster waves engulfed the town disaster centre, where she remained in front of the microphone calling on townspeople to flee to higher ground until the very last minute.14

And praise has been heaped upon the editors and reporters of the *Ishinomaki Hibi Shimbun*, who refused to let disasters or damaged printing presses disrupt their mission to deliver the news to their readers and for six days ‘put out’ a newspaper by writing information on government actions, rescue efforts, evacuation sites, and relief supplies on newsprint with magic marker and putting them up at relief centres around the city. These pin-up papers have gained such recognition that seven of the originals have been donated to the Newseum in Washington DC, and now form part of its permanent collection.15

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These may be some of the more famous stories, so often are they repeated. But a disaster of this magnitude has certainly left impressions on those who experienced it. Even today, many are still working to rebuild their lives and communities. As of early July 2012, some 53,000 temporary homes had been built in seven prefectures to help shelter those who were displaced. This figure includes about 16,600 structures constructed in Fukushima Prefecture, which was not only hit by the earthquake and tsunami, but which also had to grapple with another, more chilling, problem.

The nuclear drama in Fukushima

As shocking and heartbreaking as the images of the earthquake and tsunami were, they were soon overshadowed by yet another disaster that was to strike, some 200 km southeast of the epicentre, at the Fukushima-Daiichi nuclear power plant operated by Tokyo Electric Power Co. (TEPCO).

According to Japanese government reports to the International Atomic Energy Agency, as well as documents released by TEPCO and the findings of the government’s investigation committee, at the time the earthquake hit, of the plant’s six units, reactors No. 1–3 had been in operation, while No. 4–6 had been shut down for regular maintenance and inspections. All the fuel in reactor No. 4 had been moved to its spent fuel pool, as work was ongoing to replace the reactor’s core shield.

Reactors No. 1–3 shut down automatically after sensing the earthquake, and control rods were inserted. Sub-criticality was confirmed at all three reactors between 2:54 pm and 3:02 pm. All six reactors had lost power from external sources right after the earthquake. Because of this, at units No. 1–3 the failsafe mechanism kicked in, the main steam quarantine valves were automatically shut and the reactor core was disconnected from the turbine system. Diesel-powered generators had automatically kicked in at all the reactors, and power had temporarily been restored.

After the control rods were inserted and the valves closed, cooling was resumed at all three reactors. The isolation condenser system was used for reactor No. 1, while the reactor core isolation cooling system was used in reactors No. 2 and 3.
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The first large tsunami hit the complex at 3:27 pm, with a height of some four metres. The next wave struck eight minutes later, at 3:35 pm, demolished the on-site wave meter and surged over the protective ten-metre-high breakwater, slamming into the main buildings of the power plant. Two TEPCO workers who were in the turbine tower of the No. 4 reactor died in the tsunami strikes, while a third man was killed at the Fukushima-Daini nuclear plant 12 km to the south. He was reportedly struck by the arm of the crane he was operating when it broke off due to the force of the earthquake.

The emergency seawater pumps at all six reactors were hit, making it impossible to release decay heat. Furthermore, most of the main buildings at the plant were damaged by seawater, including many facilities that were important for maintaining safety.

Between 3:37 pm and 3:42 pm, all AC power was lost at units No. 1–5. Units No. 1, 2 and 4 also found themselves without DC power. At 3:42 pm, the plant’s operator, TEPCO, reported this to authorities in line with its legal obligations.¹⁸

The power loss not only rendered the cooling system useless, but also meant that workers were unable to check the monitoring systems that would give them the status of the No. 1 and No. 2 units, such as the water levels inside the reactor cores. This also meant that they could not confirm whether water was being properly pumped into the reactors. As a result, at around 4:45 pm, it was reported to authorities that it had become impossible to pump water into the reactors using the emergency cooling system.

Efforts were made to pump water into the reactors using other means, such as with diesel-powered fire pumps. In tandem, workers continued trying to assess the state of the two reactors’ cooling systems.

Instruments measuring water levels came back online at the two reactors at 9:19 pm and 9:50 pm respectively. They indicated that at reactor No. 1, the water level was 200 mm above the top of the fuel rods, although experts question the accuracy of this reading, given that instruments using hydraulic pressure to measure water level need to be recalibrated if they experience some serious destabilising factor. Over at reactor No. 2, readings at 9:50 pm showed that there was 3,400 mm of

¹⁸. The Law on Special Measures Concerning Nuclear Emergency Preparedness obliges nuclear plant operators to report complete AC power loss to the government.
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water above the fuel. It has since been established that the reactor was stable at this time, and experts are of the view that this figure was likely to have been accurate.

The containment-vessel pressure-gauges at units No. 1 and 2 resumed operations at around 11:25 pm and 11:50 pm, respectively. Readings showed that while pressure was low at unit No. 2, it was beyond the design level at No. 1 and the vents of the nuclear containment vessel had to be opened.

Plant manager Masao Yoshida issued the order to open the vents at around 12:06 am on 12 March. Under normal circumstances, the venting would have been done remotely, but because of the power loss, workers had to either wait for power to come back or undertake the procedure manually. Given that the move would impact the surrounding area, coordination with relevant parties was also necessary. TEPCO took a long time to set in place the procedure under which the vents should be opened, and to organise workers for this. Pressure inside unit No. 1 was confirmed to have lessened by around 2:50 pm. Several investigation committees looking into the nuclear accident have pointed out that this was one of the reasons behind the prime minister’s office becoming suspicious of whether the utility was able to manage the crisis properly.

Crisis headquarters established

Over in Tokyo, top government officials began arriving at the government’s crisis management centre in the basement of the prime minister’s official residence to respond to the earthquake-tsunami from about 15 minutes after the earthquake had struck. Prime Minister Naoto Kan, Chief Cabinet Secretary Yukio Edano and Minister of State for Disaster Management Ryu Matsumoto were among those at the centre, where monitors showed footage of live TV broadcasts as well as images taken by the Ministry of Defense. Information including damage to roads and railway networks and the number of emergency calls to police and fire

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departments were continuously announced, giving those present an idea of the extent of the disaster.\(^{20}\)

At 3:14 pm, roughly half an hour after the earthquake had hit, the government set up an emergency disaster response headquarters, as stipulated under the Disaster Response Law, and at 3:37 pm the headquarters held its first meeting, agreeing on the basic responses to the earthquake and tsunami.

Some five minutes later, however, government officials were to discover that they had a very serious nuclear problem on their hands as they received the TEPCO report that the Fukushima-Daiichi plant had lost all power. A second meeting of the emergency headquarters was held from around 4 pm, at which the response to the nuclear threat was discussed for the first time.

Industry minister Banri Kaieda had been attending a Diet committee session when the earthquake struck. He had returned to the Ministry of Economy, Trade and Industry and received the initial reports that the Fukushima plant had automatically shut down and that control rods had been inserted. Understanding that the reactors had undergone emergency shutdown, he focused on dealing with other matters such as the widespread blackouts in disaster-hit areas, and the fires that had broken out at the Keiyo industrial complex in Chiba Prefecture, east of Tokyo. He only learned about the total power loss report after emerging from a meeting to discuss the situation concerning the fires.

In an effort to tackle the nuclear issue separately from the other disaster response activities, a separate zone was established adjacent to the main crisis centre in the late afternoon. The first concrete action taken by this separate group of ministers and government officials was to dispatch vehicles equipped with power generators to the crippled plant so that electricity might be restored. However, during the course of the night, they were to learn that the vehicles were useless due to such reasons as the lack of cables to connect the vehicles to the plant’s power grid.

PM Kan, after receiving TEPCO’s report that all power had been lost at the Fukushima-Daiichi plant, declared a state of nuclear emergency at

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7:03 pm. A similar declaration was issued at 5:22 am on 12 March for the Fukushima-Daini plant.

Haruki Madarame, chairman of the government’s Nuclear Safety Commission (NSC), arrived at the prime minister’s official residence at around 9 pm, expecting that the Nuclear and Industrial Safety Agency (NISA) had been dealing with the problem. However, NISA staff were in fact struggling to establish the extent of the situation and how workers at the scene were dealing with it. As a result, he found himself having to respond to a barrage of questions from the prime minister and others ‘without anyone to discuss with, and without any handbook.’

Given that power was unlikely to be restored soon, and because high-pressure pumps to cool the units were not operational either, Madarame proposed that the vents of the containment vessel at unit No. 1 be opened so the pressure that was building up inside could be released, an idea which no one present opposed.

At 9:23 pm, the government issued what was to become the first of a series of evacuation orders, instructing people within a 3-km radius of the plant to evacuate, and those within a 10 km radius to remain indoors. This was to prepare for the opening of the vents, a procedure that would release radioactive materials into the air. By 10 pm that evening, NISA had also reached the conclusion that a meltdown would occur at unit No. 2 by 3 am the following day, if nothing was done, and the vents would have to be opened. Independent investigation teams have since branded the government’s evacuation measures chaotic, and have concluded that many residents were not made sufficiently aware of the possible dangers of radiation leakage, or given appropriate information on where to evacuate to minimise the risks.

TEPCO Fellow Ichiro Takeguro, who had joined the team at the prime minister’s official residence, contacted TEPCO headquarters to swiftly complete the internal procedures needed to open the vents. However, they remained closed while the pressure inside the contain-

21. As stipulated by the Law on Special Measures Concerning Nuclear Emergency Preparedness.
22. The tsunami struck the Fukushima-Daini plant at 3:34 pm, causing three of its four reactors to lose cooling functions. Temperatures in their suppression chambers rose above 100°C, prompting the declaration.
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ment vessels continued to rise. Finally, at around 1:30 am on 12 March, the TEPCO side sought formal government approval to open the vents. The green light was given, and Minister Kaieda told the firm to prepare to open the vents after their joint press conference to announce the move, which was set for 3 am.

However, nothing happened at the appointed time, and TEPCO’s Takeguro could give no reason for the delay when asked by the minister. As explained above, workers manning Fukushima-Daiichi themselves were aware of the need to open the vents, but the process was taking time.

By around 5 am, the prime minister was made aware of the fact that the vents had still not been opened. Given the rising pressure within unit No. 1, the government expanded its initial evacuation order to a radius of 10 km at 5:45 am, to prepare for a possible explosion at the plant.

At 6:14 am, PM Kan took off from his official residence on a SDF helicopter with a view to visiting the crippled facility. This move was later to be criticised by politicians and experts alike. Fukushima-Daiichi plant manager Yoshida was said to have been dismayed upon learning that the prime minister would be paying a visit, and had argued during a video conference with TEPCO headquarters in Tokyo that his meeting the prime minister and explaining the ongoing situation was not going to lessen the severity of the crisis.

The vents still had not been opened even after the prime minister’s departure, at which point METI minister Kaieda ordered TEPCO at 6:50 am to open the vents at units No. 1 and 2.24 His order was unclear as to exactly which vents were to be opened; government documents show that NISA was of the understanding that both No. 1 and 2 were targeted, while Fukushima-Daiichi plant manager Yoshida had determined that the situation was more serious at unit No. 1.

During the helicopter ride to the plant, NSC chief Madarame was instructed to answer the prime minister’s questions. One of the questions was whether a hydrogen explosion was possible. He replied that an explosion was impossible because there was no oxygen in the containment vessel, as it was fully replaced with nitrogen. He argued in

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24. He exercised his powers under the Law on the Regulation of Nuclear Source Material, Nuclear Fuel Material and Reactors.
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this way because he had not envisaged a situation where hydrogen might leak into the unit from the containment vessel. The head of the nation’s nuclear watchdog was to lose PM Kan’s trust completely later in the day, when at 3:36 pm, unit No. 1 was rocked by a huge hydrogen explosion.25

The prime minister arrived at the Fukushima-Daiichi nuclear plant at 7:11 am, and his first question was why the vents hadn’t been opened. When he was told that the automatic vents could not be operated due to the power failure, he pointed out that he had not made the trip just to listen to excuses. He left the plant at 8:04 am, leaving instructions to work the vents by around 9 am. In fact the vent valves of unit No. 1 were not opened until around 10.20 am, after TEPCO and the Fukushima Prefectural Government had been able to confirm that everyone in the evacuation zone had left.

At 3:36 pm, there was a large boom at unit No. 1 that was to change the whole dynamic of the nuclear accident. PM Kan, upon hearing the news and seeing television footage, turned to the NSC chief for an explanation, but is said not to have received a satisfactory response. The NSC’s Madarame himself later told an independent investigation committee that because he had earlier reassured the prime minister that a hydrogen explosion would never happen, he had been left totally stunned by the images which were now being shown on TV screens.

For the general public, however, the images of billowing smoke and a roofless shell of what supposedly housed a nuclear reactor were not accompanied by a viable explanation for over two hours. Finally, at 5:45 pm, Chief Cabinet Secretary Edano held a news conference, but only went so far as to acknowledge that ‘some sort of explosion’ had occurred, and called on citizens to remain calm. In fact, despite attempts to collect information through various channels, officials had still not been able to ascertain whether the containment vessel and pressure chamber were intact or not. Edano nonetheless decided to hold the press conference, fearing that the public would become increasingly concerned if the government failed to come out and meet the press. Despite repeated questions from journalists on whether the reactor core was undamaged and if the evacuation zone did not need to be expanded, his answers

were nothing but ambiguous. He later described that press conference as ‘the most difficult one I have ever had to give’.26

Even while Edano was being grilled by journalists, officials were contemplating whether efforts should be made to cool No. 1 reactor core with seawater. At 5:55 pm, METI minister Kaieda verbally issued the order to start using seawater. Minutes later, however, PM Kan was informed of the decision and questioned it on safety grounds, saying he was concerned about the possibility of recriticality. Madarame of the NSC replied that such a possibility could not be completely excluded, and thus the decision was taken to reconsider the seawater option.

The report of the private sector’s independent investigation commission on the Fukushima-Daiichi nuclear accident states that those who were present during this exchange of words between the two men became concerned that the seawater option, which they thought was the best course to take, would be dropped. According to the report, participants rehearsed their lines to prepare for their next meeting with the prime minister, so that he would be satisfied that the procedure was the best way forward. This second meeting was held from 7.40 pm, and the prime minister, satisfied with the supplementary explanations he received, gave the green light for Kaieda to issue the order. Madarame was not present at this second gathering.

It should be noted that over at the Fukushima-Daiichi plant, Kaieda’s initial orders had already been conveyed, and the seawater operation had begun at 7:04 pm. Plant officials were soon after informed via telephone by TEPCO’s man at the prime minister’s official residence, Takeguro, that the prime minister had not yet authorised such a move. According to the final report of the government-appointed investigation committee on the accident at Fukushima nuclear power stations of Tokyo Electric Power Co., plant manager Yoshida discussed the matter with senior TEPCO officials in Tokyo, during which the latter were of the view that the infusion of seawater should be suspended until the prime minister gave his blessing. However, although Yoshida promised his hierarchy that the exercise would be suspended, in fact he instructed his workers to continue.

The next major developments in the crisis took place on 14 March. First, at 11:01 am a hydrogen explosion rocked unit No. 3, then at around 6:22 pm it was confirmed that the fuel rods of reactor No. 2 had become fully exposed due to a lack of coolant. At around 3 am on 15 March, TEPCO President Masataka Shimizu separately telephoned METI minister Kaieda and Chief Cabinet Secretary Edano asking whether on-site workers could not be moved to the Fukushima-Daini nuclear plant, due to mounting concerns that unit No. 2 would also explode. Plant manager Yoshida was also worried about a worst-case scenario, and had already instructed his workers to prepare to evacuate, leaving only the minimum number of people necessary.27

Industry minister Kaieda said that he interpreted Shimizu’s call as a request for a complete evacuation, and rejected it outright. Shimizu’s call to Edano came just as he was being briefed by Kaieda about the conversation he had had with the TEPCO president. While Edano said he opposed a pull-out, the TEPCO chief was insistent. According to interviews conducted by the private sector’s independent investigation...

commission on the Fukushima-Daiichi nuclear accident, members of the nuclear crisis response team discussed the situation, and while the general mood was that the plant could not be left unmanned and that more ideas could be tried, no one was able to provide any concrete solutions.28

Given that the matter of evacuation involved human life, PM Kan, who had retired to his private residence, was informed of the situation at around 3:20 am. When told of the TEPCO request, he rejected it immediately. A wider group of ministers and government officials were summoned to the prime minister’s official residence, where the prime minister reiterated his opposition to a full TEPCO pullout.

It was then decided that a representative from the government – Goshi Hosono, one of the prime minister’s special advisors – should be permanently stationed at TEPCO headquarters to improve communications between the government and the power utility.

The prime minister summoned Shimizu to his official residence, and when the latter arrived at 4:17 am, PM Kan told him directly that he would not condone any retreat. He also said that he intended to station special advisor Hosono at TEPCO headquarters, and that he himself would visit the company within an hour, all of which took the TEPCO president by surprise.

This ‘unification’ of the disaster response teams was formally announced at a press conference held at 5:26 am, and PM Kan, together with industry minister Kaieda and other government officials, arrived at TEPCO headquarters at around 5:40 am. Addressing staff working in the main operation room, he reiterated that the government would not allow a retreat from Fukushima-Daiichi, and that they should be aware that the firm would collapse if it were to consider any evacuation.

Ironically, some 20 minutes later, at around 6 am, a loud crashing noise was heard in the vicinity of the pressure control room of unit No. 2, while a hydrogen explosion occurred at the building housing reactor No. 4. With this, plant manager Yoshida ordered some 650 workers to temporarily leave the power plant, leaving behind roughly fifty people who had to remain to do the necessary work – the workers the world later came to know as ‘the Fukushima Fifty’.

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The issue of whether TEPCO was really preparing to abandon ship remains a point of contention between PM Kan and the firm. TEPCO has repeatedly said it never intended to completely abandon the plant and that a team would have remained behind to deal with the accident. According to the final report of the utility’s in-house investigation committee, this was a misunderstanding that ensued from the telephone conversation between the TEPCO president and the industry minister.

Meanwhile, the Fukushima nuclear accident independent investigation commission set up by the National Diet of Japan has said that it is of the view that there was no indication that TEPCO was considering a full pull-out of its workers, and that it would be wrong to think that PM Kan acted to prevent such a situation. A government-appointed investigation committee is also of the opinion that this was a misunderstanding on the prime minister’s part, while pointing out that the TEPCO president also failed to state clearly that necessary personnel would remain on site.

The words and actions of the prime minister during these hours indicate that he was becoming increasingly suspicious and concerned over whether TEPCO had the resolve, resources and know-how to overcome the crisis. These doubts were shared to a certain degree by other key figures, including Kaieda and Edano.

But interestingly, many who have since investigated the chain of events and actions surrounding the Fukushima accident are of the view that the establishment of the joint disaster headquarters helped coordination and information-sharing between TEPCO and the government improve considerably, and that it was a key turning point in efforts to contain the disaster.

The situation in Fukushima remained grim, however, and the hydrogen explosion at unit No. 4 on the morning of 15 March shifted the government’s attention to this building. Although the unit itself had not been in operation when the tsunami hit, the pools containing spent nuclear fuel were located on the top floor, and the roof of the building had been blown away by the explosion, exposing the pools. The greatest fear was that with cooling systems not working, the fuel rods would become exposed as water evaporated, causing them to melt. The pool itself was

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also believed to be structurally weak, especially after the earthquake and explosion, so that any aftershocks could cause the bottom to fall out.

On the afternoon of 16 March, Air Self-Defense Force helicopters flew over unit No. 4 to confirm the state of the spent fuel pools and measure radiation levels. The crew saw that the fuel rods were still submerged in water, a finding that gave some respite. From around 9.48 am the following day, ASDF helicopters flew over unit No. 3 four times, dropping some 30 tonnes of seawater onto the building in an effort to keep its spent fuel pools from going dry.

This was to be the first attempt in a tireless operation to dose the spent fuel pools with water that involved the SDF, police and fire units, using helicopters, water cannons and fire trucks, often moving in at close range to maximise the odds for success. However, their efforts were not having the desired effect of filling the pools with any notable amount of water.

These efforts had an international angle as well, as a variety of pumps were brought to the scene to assist. A concrete pump truck with a huge arm developed by the German Putzmeister Group, called the ‘Giraffe’, was borrowed from the port of Yokohama, where it was waiting transport to Vietnam; it arrived on the scene on 22 March. The next day, a Chinese pump with a 62-metre arm was donated to TEPCO, while two pumps, including one of the largest in the world, were also delivered from the US. These external efforts, which first used seawater and then fresh water, were to continue until the cooling pumps came back on-line as external power was secured.30

The international dimension

At 10:22 am on 17 March, about half an hour after the first SDF helicopter water drop, PM Kan spoke to US President Barack Obama over the telephone. During the conversation, which lasted for some 30 minutes, President Obama is said to have touched upon Washington’s intention to recommend all US citizens in Japan to evacuate. This did not come completely as a bolt from the blue.

The security alliance between Japan and the US is showcased as being a cornerstone for peace and stability in the Asia-Pacific region.

In the aftermath of the earthquake-tsunami, the US military forces in Japan fanned out across the Tohoku region in a relief-and-rescue effort dubbed ‘Operation Tomodachi [Friends]’. Not only did the US armed forces bring in relief supplies and assist in search-and-rescue operations; they also brought in heavy machinery to rebuild infrastructure, including Sendai Airport. The highly visible operation was widely appreciated – certainly among the citizens of the afflicted areas but also among the wider public – and helped raise the standing of the US military forces in Japan, which have often made headlines for less commendable actions.

While the relationship between Japan and the US is unique, as it is underpinned by a bilateral security treaty, the Americans were not alone in showing their support and generosity towards a country in need.

Reflecting Japan’s past generosity as an international donor, assistance and supplies poured in from around the world, together with condolence messages. According to the foreign ministry, six countries – the US, South Korea, Singapore, China, Switzerland and Germany – dispatched rescue teams to afflicted areas within three days of the earthquake. Similar teams also arrived from countries as far away as South Africa, while it was the first ever overseas deployment for India’s
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National Disaster Response Force. Israel made headlines for dispatching its medical team to the town of Minamisanriku, Miyagi Prefecture, because it marked the first time Japanese authorities allowed foreign doctors to treat patients without a Japanese license.

The Japanese Red Cross Society received some ¥57.8 billion in donations from sister Red Cross and Red Crescent societies around the world, money which it uses for projects in the disaster-hit areas. It separately received over ¥314.6 billion in donations from both Japan and overseas by the end of March 2012, which was to be distributed to those affected via local municipalities.

The most charitable overseas donor was Taiwan, whose citizens and government donated a total of over ¥19 billion, while the extent of the tragedy appeared to have even moved the Democratic People’s Republic of Korea, which donated $100,000 to the Japanese Red Cross in the name of late leader Kim Jong-il, despite having no diplomatic ties with Tokyo.

The assistance did not just come in the form of people and money. The weeks after the earthquake-tsunami saw thousands of people lacking basic necessities at a time when spring had yet to arrive in northern Japan, and the international community was quick to deliver aid in the form of food, mattresses and sleeping bags. By late April, the European Union had delivered some 400 tonnes of in-kind assistance donated by its member states via its civilian protection mechanism. Uzbekistan provided tents, blankets and boots, while the Maldives left its mark by offering some 690,000 cans of tuna, in a gesture it explained was a way to thank Japan for its decades of economic assistance to the island nation. Many countries also organised a wide range of events, extending from cultural performances to culinary treats, to boost the morale of people at evacuation shelters and other sites.

As the nuclear crisis unfolded, the US is said to have become increasingly concerned about the situation in Fukushima, not least because of concerns that the information provided by the Japanese authorities was insufficient and, given the extensive damage at the nuclear plant,

33. This does not preclude assistance offered bilaterally by EU member states.
possibly inaccurate. One example that indicates the extent of concern about the accuracy of the Japanese information and assessments is how Washington’s views on the Japanese evacuation zones changed over time.

On 13 March, the US Nuclear Regulatory Commission (NRC) called on US citizens living in Japan to follow the safety recommendations of the Japanese authorities. When Japan at around 11 am on 15 March expanded the evacuation zone to a radius of 20 km from the plant, with those living 20–30 km from the site to remain indoors, the NRC announced that the US would have done the same under similar circumstances.

However, on the following day, the NRC made a complete volte-face and instructed all US nationals living within a 50-mile radius of Fukushima-Daiichi to leave. It said that the instruction was based on ‘new computer analyses’ of the situation, whose results were checked against US guidelines for securing citizens’ safety. At 2:15 pm the next day, the US government advised that all US citizens in Japan consider leaving the country, while the US State Department allowed relevant family members of US government employees to leave Japan voluntarily.

Investigation committees have since lambasted the central government’s actions concerning evacuation, saying that it put citizens’ health and safety at risk. One report notes that only one-fifth of the residents of the town hosting the Fukushima-Daiichi plant were aware of the accident when the evacuation for the 3-km zone was issued at 9:23 pm on 11 March. While most residents impacted by the 10-km evacuation order issued at 5:44 am on 12 March knew about the accident, they were not informed of details, or in which directions they should flee.

The central government’s failure to use radioactivity data compiled by the System for Prediction of Environmental Emergency Dose Information (SPEEDI) to help determine the timing and direction for


37. The official report of the Fukushima nuclear accident independent investigation commission.
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Figure 2.5: Evacuees escaped the cities affected by the tsunami and the elevated levels of radiation. Schools, gyms and community halls were turned into temporary accommodation centres.

evacuation instructions has also come under fire. Authorities decided not to disclose the SPEEDI data immediately after the accident because they believed that it was not accurate enough, given that it was unable to obtain some information concerning the status of the power plant due to system malfunctions right after the earthquake hit.38 Experts’ views on this are split: while some say that the data could have been used in the evacuation process, others question whether it would have been accurate enough to determine areas to which residents should move.

On 12 April, roughly one month after the earthquake-tsunami, NISA announced that it would raise the severity of the Fukushima accident to the highest Level 7 on the International Nuclear and Radiological Event Scale (INES) from its initial classification of Level 5. The Chernobyl disaster had so far been the only incident rated at the top of the INES. One month after that, TEPCO confirmed that meltdown had occurred at the core of No. 1 reactor.

Towards the end of 2011, the central government tried to bring some semblance of closure on what had been a sad, difficult year. On 16

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December, Prime Minister Yoshihiko Noda, who assumed the post after Kan’s resignation in September, officially declared that the Fukushima-Daiichi nuclear plant was in a state of cold shutdown, meaning that the temperature of the coolant remains below boiling point and that radiation from the reactors is within the government’s limit for the public, one millisievert per year.

The government and TEPCO plan to remove the molten fuel from units No. 1–4 in 20–25 years’ time, and carry out the complete demolition of these facilities in 45 years’ time. However, some steps of the envisioned process will require technologies that are not yet available, and it remains to be seen if this timetable is viable. While the worst may be over, thousands of people who evacuated from the areas around the plant are still unable to return to their homes and – if government projections are to be believed – many never will.

The accident at the Fukushima-Daiichi plant has also had repercussions on nuclear energy policy far beyond Japan’s shores. In the European Union, the European Commission ordered so-called stress-tests on all nuclear reactors in the 27 member states to check how well they would stand up to natural and man-made disasters. Germany was the first major nuclear power to turn its back on this energy source after the accident, deciding immediately to shut down the seven oldest of its 17 reactors and reinstating a phase-out scheme that will see all reactors closed by 2022. In France, the world’s most nuclear-reliant country, Socialist François Hollande won the presidential election of May 2012 on a pledge to reduce nuclear dependence from more than 75 to 50% by 2025. On the other hand, the United Kingdom has clearly stated that it will maintain its present policy that nuclear should be part of its future energy mix ‘providing there is no public subsidy, beyond that available to other low-carbon energy sources’.

The accident has also dented Japan’s hopes to export nuclear technology, which it had hoped would be competitive as countries around the globe rushed to find effective ways to reduce dependence on fossil fuels and reduce their carbon emissions. In October 2012, a nonbinding referendum held in Lithuania saw 62% of voters rejecting a project that

would see Japan’s Hitachi Ltd. build a nuclear plant in the Baltic state. The contract, signed in March 2012, had been the first such deal struck by a Japanese company since the Fukushima disaster.

Answering the questions

Japan is an archipelago whose fate will always be intertwined with that of shifting tectonic plates. But what separated the Great East Japan Earthquake from all the major temblors that preceded it was not only the scale of devastation, but the dangers posed by the nuclear accident in Fukushima – even more frightening because radioactivity has no colour or scent.

Up until the Great East Japan Earthquake, the nation had focused its disaster prevention strategy on dealing with natural calamities that had occurred over the past several centuries and which had been meticulously studied. As such, an earthquake of a scale similar to the previously mentioned Meiji and Showa temblors had been expected. However, an even larger earthquake that struck the region some 1,100 years ago had not been included in the equation, as it was impossible to specifically estimate the resulting damage.

That has all since changed, and the government’s central disaster council stipulated in a report submitted in September 2011 that disaster countermeasures should in future be based on the biggest earthquakes and tsunami scientifically possible. It also called on the government to place more focus on disaster reduction to minimise human and material damage, rather than prevention.

The Fukushima accident, for its part, triggered demands from various sides for a review of Japan’s nuclear policies, as well as some serious soul-searching as media reported on the cosy relationships among regulators, industry, politicians and academics that have helped propel nuclear power in the country over the decades despite accidents and incidents along the way, some of which had not been immediately disclosed.

Until Fukushima, the worst nuclear event in Japan had been the criticality accident at a uranium reprocessing facility operated by JCO Co. in Tokaimura, Ibaraki Prefecture, in September 1999.40 A solution of

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enriched uranium in an amount reportedly about seven times more than the specified mass limit had been poured into a tank for homogenization purpose, reportedly in violation of legally approved criticality-control measures. Three workers suffered acute radiation syndrome, of which two died, while a number of workers and members of the public received radiation doses. It was classified as a Level 4 accident on the INES.

The country has also seen such incidents as a sodium leak and ensuing fire at the Monju experimental fast breeder reactor in December 1995 that shut down the reactor, and an uncontrollable nuclear chain reaction that occurred for 15 minutes at reactor No. 1 of the Shika nuclear power plant in Ishikawa Prefecture in June 1999 after three control rods accidentally fell during a regular inspection.41 In the case of the latter, the incident was covered up by plant management and was only made public in March 2007, after which authorities ordered all nuclear-plant operators to check for past malpractice. The subsequent findings prompted critics of nuclear energy to underscore ‘the hollowness of the “safety first” mantra’.42

The losses resulting from this triple disaster have been tremendous, both in terms of human life and material damage. It was only natural for relevant parties to investigate what actually happened, evaluate the actions taken and outline the lessons learned. This was deemed particularly necessary on the nuclear front, given the nation’s continued reliance on nuclear power for at least the coming years.

To date, four separate entities have produced reports on their investigations into the Fukushima nuclear accident: the Fukushima Nuclear Accident Independent Investigation Committee (NAIIC) set up by the National Diet, the government-appointed Investigation Committee on the Accident at Fukushima Nuclear Power Stations of Tokyo Electric Power Co. (ICANPS), the Independent Investigation Commission on the Fukushima-Daiichi Nuclear Accident, established by the private sector, and a TEPCO in-house investigation team.43 By the end of July 2012,


43. In addition to the executive summaries in English of the previously mentioned NAIIC and ICANPS reports, English summaries of the private sector investigation report and TEPCO’s
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all four had released their final reports, which were widely reviewed and compared.

Although the reports agree on some elements, they do not concur on many key points, such as whether the Fukushima-Daiichi plant was only damaged by the tsunami and not by the earthquake itself, whether initial measures to contain the crisis were appropriate, and whether the corporate culture at TEPCO and the power industry as a whole exacerbated the situation.

The TEPCO report did not touch upon the issues of whether the government’s evacuation orders had been appropriate or whether the SPEEDI system should have been utilised to assist in the evacuation of residents. As for the other three investigation teams, all were of the view that the government bungled the evacuation, but were split on whether SPEEDI could have been used effectively under the circumstances.

Had the reactors really withstood the destructive power of the earthquake? To what extent had this been a man-made disaster? Did the decades-long cosy relationship between power companies and regulators prevent fundamental nuclear safety issues from being addressed? Had everyone, including the general public, been too trusting in believing that nuclear power generation was safe? Such are the questions that have sprung forth from the Fukushima accident – questions yet to be fully answered.

The reports are more of an opening first act than a full evaluation of the events that occurred on and after that fateful March day. Despite months of conducting interviews of key figures and poring over logs, meeting minutes and other key documents, it would appear that their most significant achievement is having shown how much more work is needed to truly shed light on the accident, the response and the repercussions, so as to consider ways to prevent a recurrence.

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CHAPTER THREE

Unity and fragmentation: Japanese politics post-Fukushima

Dominic Al-Badri

Introduction
The earthquake–tsunami–nuclear-power-station triple disaster on 11 March 2011 was of a proportion and complexity never before experienced in modern times by any country outside of wartime. In the immediate aftermath of the events of that day it seemed possible that a new cooperative spirit might infect the world of Japanese politics and allow for significant changes in the national polity. The initial feeling was that there was suddenly much greater room for cross-party consensus and the opportunity for reforms that though potentially unpalatable under normal circumstances could find a more willing ear from the public due to the exceptional situation. However, this feeling did not last very long and the political system was back to business as usual within a month.

Nonetheless, an unintended short-term consequence of the disaster was that the domestic political situation in Japan actually became a little clearer than it had been. Prime Minister Naoto Kan, whose time at the top had seemed about to end on 10 March, earned a reprieve, which – though it only lasted for five and a half months – enabled him

1. I would like to thank my colleague Mariko Ikkanda for her perceptive comments on an earlier draft of this chapter, and The Guardian’s Jonathan Watts for his early encouragement regarding the entire project. In the interests of legibility I have kept footnotes to a minimum throughout the chapter, inserting them mainly to add complementary or explanatory information. For research purposes, and to bolster my memory, I have referred to various mainstream media (particularly Asahi Shimbun, The Japan Times, Kyōdō Tsūshinsha, Shūkan Bunshun and the Yomiuri Shimbun) and official transcripts of press conferences given by the prime minister and the chief cabinet secretary (http://www.kantei.go.jp/foreign/noda/statement/index_e.html and http://www.kantei.go.jp/foreign/tyoukanpress/index.html respectively), as well as relying on notes I have from meetings and interviews with politicians, reporters and other observers. Naturally, I am responsible for any inaccuracies which may have inadvertently arisen.
to introduce some potentially far-reaching legislation. Although other disaster-specific legislation has been introduced, the direct impact of 11 March 2011 on the political system itself remains more nebulous. This chapter will look at what happened in the first few weeks immediately after the triple disaster followed by a brief overview of the state of Japanese politics in the preceding years. The chapter will then detail how national politics unfolded in the 18 months after the triple disaster before ending with a look at the implications for Japan.

What happened in the first few weeks after the triple disaster

The initial impact of the triple disaster was to relieve the intense pressure that was being exerted on PM Kan’s administration by his numerous opponents both in opposition political parties and in his own Democratic Party of Japan (DPJ). This confrontational state of affairs immediately receded to be replaced by an atmosphere of constructive cooperation which unfolded in the days that followed 11 March. Kan was widely seen as benefiting from this unanticipated truce and the question of his political future was put to one side in the interest of national unity. Prior to 11 March, as will be discussed in detail later, the main opposition Liberal Democratic Party (LDP) had been pushing hard to topple Kan and trigger the dissolution of the House of Representatives, thereby forcing a general election in which it hoped to regain many of the seats it had lost in the previous Lower House election in August 2009.2

A disaster of the scale that hit Japan on 11 March creates a dilemma for any opposition political force between how to respond in a seemly manner, acting in the natural interest, and how to continue to function as opposition politicians. On the one hand, the opposition has to behave responsibly by not blocking funds for reconstruction or legislation that would benefit the stricken areas, but on the other it cannot give up its quest for power or deviate too much from its own political agenda. Thus, following the triple disaster, the LDP had to shift to a more cooperative stance; indeed, in the weeks that followed, the possibility of forming a grand coalition of the two main parties was floated and abandoned

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2. Throughout this chapter the term ‘House of Representatives’ will be used interchangeably with ‘Lower House’ purely for purposes of readability; similarly, ‘House of Councillors’ will co-exist synonymically with ‘Upper House’.
several times. The LDP was divided over the issue, but in the end the party hierarchy declined to link up with the DPJ to form a government of ‘national salvation’. Nonetheless, LDP President Sadakazu Tanigaki made it clear that his party remained ready to cooperate with the ruling coalition on earthquake relief and disaster recovery efforts.

The first joint earthquake response meeting between members of the government and the opposition took place on 16 March when the opposition asked that the emerging fuel shortage situation in the disaster-affected areas be resolved as quickly as possible. Tensions between the government and TEPCO, the power utility that operated the Fukushima-Daiichi nuclear power station, steadily worsened as the days passed. The Ministry of Defense expressed its lack of confidence in TEPCO’s safety assessment following injuries sustained by four

Figure 3.1: Naoto Kan, speaking at the World Economic Forum Annual Meeting in Davos just weeks before the disaster
members of a Self-Defense Forces special weapon protection unit while they were feeding water to No. 2 reactor following an explosion at Fukushima-Daiichi on 14 March.

By 17 March, Chief Cabinet Secretary Yukio Edano had his hands full to overflowing in the role of chief government spokesman as he tried to balance the need to keep the public informed against causing unnecessary panic as the Fukushima-Daiichi nuclear power station situation worsened, and so, in an effort to better coordinate relief efforts, Kan appointed Yoshito Sengoku to the powerful position of deputy chief cabinet secretary.

The following day, suggestions began circulating widely that PM Kan was considering bringing into a national unity cabinet the leaders of the main opposition LDP and the smaller opposition party New Kōmeitō, which has long allied itself with the LDP. A proposal to revise the Cabinet Law to increase the number of ministers by three to try to ensure more effective oversight of the reconstruction process was also put forward.3 DPJ Secretary-General Katsuya Okada had called for opposition support on this matter the day before and cooperation seemed likely to be forthcoming.

Although relations between PM Kan and former DPJ party leaders Yukio Hatoyama and Ichiro Ozawa had cooled, the prime minister met them on 17 March to seek their assistance in the post-disaster phase, but Hatoyama and Ozawa simply called on the government to do more and also to provide the public with information in a more expedient manner.

Diet deliberations on the budget for the 2011 fiscal year restarted on 22 March, with the minister in charge of economic and fiscal policy, Kaoru Yosano, saying that up to three supplementary budgets would be needed. On 23 March, LDP Secretary-General Nobuteru Ishihara refused to cooperate with the DPJ on enacting legislation to extend by six months the financial child-support system that was one of the ruling party’s key policy objectives.4 The LDP’s junior ally, New Kōmeitō,

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3. At the time this law stipulated that the cabinet could contain no more than 17 ministers, excluding the prime minister.
4. Critics of the DPJ’s child-allowance system cited the fact that money was handed out willy-nilly to families, without any means testing or guarantees that it was actually being used for children or child-related services. At the time, an allowance of ¥13,000 was given monthly to each family with a child under 15. The DPJ had wanted to increase the allowance to ¥20,000 for those with children under the age of 3, but withdrew the planned legislation in March 2011 due to opposition protests.
confirmed its support of the LDP’s move, and both parties called for an end to all of the ‘handouts’ that the government had been giving to the public and to use the money to help with the reconstruction and recovery process instead.

On 29 March, the budget for FY 2011 was finally enacted in the House of Representatives. (It had been voted down in the opposition-controlled House of Councillors earlier in the day, causing the legislation to return to the Lower House.) The budget was a record-breaking ¥92.41 trillion with borrowing exceeding tax revenues for the second year in a row. However, the legislation for the issuance of deficit-covering bonds was, unusually, separated from the budget bill itself as only the former was guaranteed passage under the constitution. And although the two main opposition parties had expressed their intention to block legislation that would allow for the aforementioned temporary, six-month extension of the government’s child support programme from being passed, it was extended on 31 March after some of the other small opposition parties voted to back the government.

5. Under the Japanese constitution the Lower House can overturn an Upper House vote regarding the budget. Thus, after its rejection in the Upper House, the bill returned to the Lower House, where the ruling Democratic Party of Japan held a majority, allowing them to enact the legislation. Budget-enactment legislation, however, is not covered by the constitution in the same manner.
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On 10 April, and again a fortnight later, a large number of municipal and gubernatorial elections were held across Japan, with over 2,300 seats contested. The DPJ fared so poorly in the first round of these elections with its candidates beaten in several high-profile races by LDP-backed contenders that the opposition parties were emboldened to adopt a more confrontational stance after the month-long ‘truce’. (Elections in municipalities that had been seriously affected by the disasters were postponed until the autumn.)

The 10 April elections also saw the emergence in Osaka, traditionally referred to as Japan’s ‘second city’, of a regional party (Osaka Ishin no Kai, Eng.: Osaka Restoration Association) headed by the popular Toru Hashimoto, who was then governor of Osaka Prefecture. Hashimoto’s party’s victory came mostly at the expense of the DPJ, and was an early indicator of the resurgence of the deeper public malaise with establishment politics which had been a key driving force behind the anti-LDP vote that had brought the DPJ to power just two years previously, and which was now being turned against the DPJ itself.6 The difference here was that Osaka Ishin no Kai won partly on the strength of Hashimoto’s performance as Osaka’s governor; though not everyone in Osaka agreed, enough of its famously no-nonsense citizens saw Hashimoto as having exhibited true leadership, a quality not perceived as being overly abundant at the national level in recent years, according to the results of public surveys.

The DPJ’s equally dismal performance in the 24 April elections in which DPJ-backed candidates were defeated by those affiliated with the LDP compounded the defeats a fortnight previously. Although Kan and Okada did their best to downplay the successive setbacks, criticism widened to include not just opposition parties but also those elements within the DPJ who, though they had been hostile to PM Kan, had kept a lower profile than prior to the triple disaster for the sake of party harmony.

Regarding economic matters, the government cited the triple disaster as a reason for postponing the decision whether to try to enter preliminary Trans-Pacific Partnership (TPP) trade talks that it had previously said would take place by June 2011. Japan’s possible membership of this trade bloc was – and remains – a divisive issue both within the party and

in the country at large due to the perceived threat it poses to many parts of the protected agriculture sector.

The LDP and other opposition parties did, however, agree to support the passage of the first reconstruction budget (¥4.02 trillion), which the government enacted on 2 May after a unanimous vote in the House of Councillors. The funds earmarked in the budget were to finance reconstruction in the disaster-affected regions such as removing rubble and debris, and constructing short-term/temporary housing for evacuees and other displaced persons.

Several opinion polls taken within the first month of the triple disaster suggested that while the public generally approved of the government’s response to the earthquake and tsunami, it was less enamoured with its response to the nuclear accidents. The hike in Kan’s personal popularity was quite small, partly because he preferred to portray the image of a tenacious, hard-working prime minister away from the limelight, leaving it to Chief Cabinet Secretary Edano to act as the public face of the government.

However, while Edano carried out his duties competently, Kan remained in the shadows, and opinion polls show that a sizeable majority of the public interpreted this as a lack of leadership from the prime minister as the crisis continued to unfold. Some critics have argued that a few more public appearances by Kan to explain personally how he was overseeing the response to the disaster victims, to reconstruction plans and to the nuclear crisis would have instilled more confidence in the citizenry.

**The political situation prior to 11 March 2011**

One needs to go back to at least 2005 to put in context the political situation in Japan as it existed on the morning of 11 March 2011. In September 2005, the LDP’s popular prime minister, Junichiro Koizumi, won a resounding landslide victory on the unlikely issue of postal privatisation that saw his party take 303 of the 480 seats in the Diet’s House of Representatives. With the addition of the 31 seats held by New Kōmeitō PM Koizumi headed a coalition that controlled 69.5% of the Lower

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7. The year 2005 has been taken as it marks the high point of the LDP’s post-bubble popularity. It can easily be argued that one needs to go back to the 1970s, when political corruption scandals started to break into the open and public distrust in the political system began to emerge, or even to the introduction of the 1947 Constitution, to put Japan’s political situation into context. But this is not a history book.
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House’s seats, giving it the two-thirds supermajority that is necessary to enact legislation without the assent of the House of Councillors.8

Following this election, the DPJ began the slow process of rebuilding under the tutelage of Ichiro Ozawa following the defeat that had left the party with just 112 Lower House seats. Koizumi stepped down in 2006 after having become the first Japanese prime minister since 1972 to serve five years in office. However, none of Koizumi’s three successors, Shinzo Abe, Yasuo Fukuda and Taro Aso was able to last for more than a year before being replaced in internal LDP party elections.9 By the time the August 2009 Lower House election came around the party leadership had lost the overwhelming public mandate that Koizumi had secured.

The partial Upper House election of 29 July 2007 had constituted the first wake-up call for the ruling coalition. The LDP and its coalition partner New Kōmeitō faced a real problem in retaining their majority in the chamber following several scandals such as revelations that the Social Insurance Agency had lost track of 50 million pension records, and the suicide of the agriculture minister who had become engulfed in allegations of serious financial impropriety. The latter incident in particular further damaged the image of the LDP among much of the public, which, whatever the truth, perceived the party as being riddled with corruption and pork-barrelling practices.

On election day, the DPJ achieved a victory over the LDP nearly as crushing as the one the LDP had meted out to the DPJ two years previously. The ruling coalition won only a third of the 121 seats that were being contested and gave up its primacy in the Upper House for the first time. The DPJ was now the largest party in the House of Councillors.

The Diet was thus in a situation where legislative work could potentially be severely disturbed. Even though the Upper House cannot override legislation, it can delay it for 30 days, and the Diet would have been paralysed without the two-thirds majority that the ruling coalition still maintained in the Lower House. In the last two years of the LDP–New

8. In Japan’s bicameral system, the balance of power in the more powerful House of Representatives is the main determining factor of Japan’s political life, but the House of Councillors is unusually strong for a second chamber.

9. The DPJ criticised these internal coups and the association they came to have with ‘revolving-door’ prime ministers and called for general elections to renew (or not) the LDP’s public mandate. The DPJ however fell into the same habit once it gained power in 2009.
Kōmeitō coalition (2007–09) it had to use this supermajority to steamroll enactment of key legislation that had been rejected by the Upper House by invoking a rarely used provision of the constitution. However, the LDP was unsuccessful in casting the DPJ under its new leader Yukio Hatoyama as the villain in the deadlock that almost suffocated Japanese politics in this period, and the day before the 30 August 2009 Lower House elections it was clear that the LDP was heading for a fall.  

The DPJ’s core campaign promise centred on the notionally dry, but potentially revolutionary, promise to initiate ‘administrative reform’, and both it and the LDP were also taking childcare and education issues seriously. The DPJ came under fire for revising parts of its manifesto following criticism from both within and outside the party – an issue that would come back to haunt them. But even this did little to erode the feeling amongst much of the electorate that it was still time for a change of government – many voters had finally lost their patience with the LDP and were thus willing to back the DPJ.

Come the day, come the landslide victory: the DPJ comprehensively defeated the LDP in the House of Representatives election and for the first time under Japan's post-war constitution, a party other than the LDP had managed to secure an outright majority for itself. Although this was not the first time since World War II that Japan had had a non-LDP administration, the fundamental difference was that this time it would not be based on a ragtag coalition of disparate groups as it had been under the coalition administrations of 1993–94. The scale of the victory meant that the fortunes of the two main parties in the Lower House had been entirely reversed.

It soon became clear that the DPJ was a victim of its own success and the fact that the result had come about through extreme voter disillusionment with the LDP rather than as a ringing endorsement of the DPJ’s manifesto for change would come to damage the party within a year of its victory. Part of the responsibility for this is due to the manner in which the administration tried to resolve the dispute over the relocation of the US Marine Corps Air Station Futenma, while scandals surrounding political funding involving the prime minister and other DPJ politicians – in par-

10. Ichiro Ozawa had stepped down as DPJ party president on 11 May 2009 due to allegations that one of his staff was involved in a murky political funding scandal. Related allegations and the eventual trial of Ozawa himself would continue to hang over the party until 2012. Ozawa eventually left the DPJ in July 2012.
ticular Ichiro Ozawa whose resignation as party president before the election had not caused the allegations to dissipate – also made the fledgling administration’s job more difficult. These issues dogged the party’s first ten months in power and received widespread media coverage, rapidly taking the shine off the DPJ’s initial appeal.

Hatoyama’s replacement by Naoto Kan as party president and thus prime minister in June 2010 did little to improve the party’s fortunes. PM Kan introduced the consumption-tax-rate-increase issue into the debate during the July 2010 House of Councillors election campaign, which some argue ended up backfiring against the DPJ even though polls initially showed public understanding for the need to raise the tax. In any event, the DPJ fared badly at the polls and an alliance of opposition parties gained control of the Upper House. The DPJ, despite holding a record number of seats in the House of Representatives, even with the cooperation of its coalition partners, lacked the two-thirds supermajority in that chamber which it needed to override Upper House decisions. And so the Diet returned to a state akin to the one it had been in for the last two years of LDP–Kōmeitō rule, with the added handicap that the opposition’s control of the Upper House meant that it could stall the passage of virtually all legislation through the Diet.

Despite this serious setback, Kan won re-election as DPJ party president in September 2010, staving off a challenge from Ichiro Ozawa whose better-than-expected performance in an unusually brutal race showed that he retained considerable support among DPJ MPs, though he lost out to Kan in votes from party chapters and individual members. When PM Kan offered only a few cabinet positions to the pro-Ozawa camp the DPJ’s internal rift deepened. Externally, relations with China worsened when the Japanese Coastguard took into custody a Chinese trawler captain who, on 8 September 2010, had caused his vessel to collide with a Japanese ship in waters around disputed islets (known in Japanese as Senkaku and in Chinese as Diaoyu) that Japan holds but to which China lays claim.

11. In public opinion polls taken by the Asahi Shimbun in early June 2010, 75% of those polled backed PM Kan’s stress on the need to tackle fiscal reconstruction (http://www.mansfieldfdn.org/backup/polls/2010/poll-10-19.htm) and more were for than against the idea of raising the consumption tax (http://www.mansfieldfdn.org/backup/polls/2010/poll-10-22.htm). However, these figures changed as the House of Councillors election campaign progressed.
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The government’s handling of the fallout from both this incident and an unrelated territorial spat with Russia suggested a lack of coordination at the top of government, and PM Kan’s position continued to weaken steadily as the year played out. In the face of a number of diplomatic snubs from China, Kan said his government would compile a new defence programme, boost the military-security alliance with the US, and accelerate preparatory work to join the US-backed multilateral TPP, though the repercussions from the latter move continue to linger in the face of domestic resistance from the agricultural lobby, the Ministry of Agriculture, Forestry and Fisheries, and other vested interests.

By the time the ordinary Diet session began on 24 January 2011, it was clear (following the effort involved in getting a supplementary budget through the Upper House the previous November) that there would be little co-operation from the opposition parties, and that PM Kan’s administration would struggle to pass both the budget and budget-implementation legislation.12

At the end of the month, Standards & Poor downgraded Japanese debt and Ozawa was indicted over the political-funds scandal that had brought about his downfall as party leader two years previously. This added to the prime minister’s woes as Ozawa said that he would not quit as an MP while he tried to clear his name. This led to the party leadership suspending his party membership on 22 February. Five days prior to that a group of 16 DPJ MPs publically protested against the recent moves by the party leadership to punish Ozawa, while a junior minister resigned in sympathy.

As February dragged on and opposition intransigence snuggled into attritional mode the pressure on PM Kan continued to build. Budget deliberation sessions in the Diet revealed that the DPJ’s manifesto promises were now unrealistic due to a huge revenue shortfall. Then, on the evening of 6 March, Foreign Minister Seiji Maehara announced his resignation after just six months in office when it was revealed that he had received illegal political donations from a South Korean resident of Japan in contravention of the Political Funds Control Law. Maehara had

12. On 26 November 2010, Prime Minister Naoto Kan’s administration managed to enact a supplementary budget to fund a ¥5.1 trillion stimulus package even though the opposition rejected the proposal in the Upper House. Under the Japanese constitution the Lower House can overturn an Upper House vote regarding the budget. [See footnote 5 above.]
a well-regarded vision for Japan's foreign policy and his departure was a major blow to PM Kan's administration.

Although the sum was relatively small (¥250,000 over a five-year period) and its origin difficult to detect for Maehara's financial managers, it was clearly illegal. Maehara denied that the money had influenced his foreign policy in any way, but he acknowledged his failure to supervise his aides with regard to the political donations and swiftly decided to quit, even though the prime minister asked him to stay on.

Maehara's departure deepened the well of political stagnation in which opposition parties continued to rebuff the DPJ's attempts to seek cross-party discussions on the important issues of the day, not least the FY 2011 budget. The DPJ had also sought to hold cross-party discussions on reforming or overhauling the political system, but opposition parties had not been particularly amenable to this either.

When accusations surfaced a few days later that PM Kan had accepted a similar donation from a foreign resident, he said that he had been unaware of the donor's nationality and that he would return the money and not resign. Nonetheless, although similar actions do not trigger the same consequences, it was clear on the evening of 10 March 2011 that it would be difficult for Kan to explain his funding misdemeanour to voters. At the same time Kan was already in trouble over the passage of budget-enabling legislation that had moved through the Lower House in the early hours of 1 March. The DPJ had taken the unusual step of separating the budget bill itself from the budget-related legislation as the former would become law no matter what the opposition-controlled Upper house decided. But with the opposition certain to reject the legislation in the Upper House the DPJ was struggling to cobble together the two-thirds majority in the House of Representatives it would need to force through by the end of March 2011 the budget-related bills.

How this gridlock was to be broken will remain a mystery. Sensing that there were no other heavyweight contenders to take over from Kan as DPJ party president, the opposition was all set to hold out for nothing less than a Lower House dissolution and a snap general election. Although it is risky to predict past events that did not transpire, even if an election had taken place, the political situation would have been unlikely to change drastically as, though the DPJ was certain to
lose plenty of seats, none of the opposition parties was popular enough to secure a working majority.

By this point public approval ratings for the Kan administration were hovering around the 20% mark and it seemed that the hope that the DPJ would be able to effect real change when it won its landslide victory in the summer of 2009 had morphed into a deeply-rooted disenchantment as to whether the political system would ever be able to reform itself.

And then came the Great East Japan Earthquake.

**How the domestic political situation subsequently evolved**

On 8 June 2011, Naoto Kan marked one year in office. The cross-party consensus that had arisen in the immediate aftermath of the disasters had all but evaporated by this point. Opposition forces were once again circling the prime minister trying to find the best way to finally force him from office. On 2 June, a few days prior to his first anniversary in office, and to the surprise of many, Kan announced that he intended to step down once post-earthquake reconstruction efforts were on track. The precise time-frame that Kan had in mind when he made this statement remains a matter of conjecture, but it soon became clear that there was a large perception gap between the opposition’s interpretation of the prime minister’s statement and what Kan himself had in mind.

Kan’s decision was sparked by the submission in the House of Representatives of a no-confidence motion against the cabinet on 1 June. This had been submitted by three opposition parties, which hoped to win over up to 80 DPJ rebels from amongst those who regarded themselves as followers of DPJ heavyweights Ichiro Ozawa and former PM Yukio Hatoyama, whose opposition to Kan within the party was hardly a secret. Following back-room negotiations with his internal opponents, PM Kan blunted the opposition’s feint by announcing he would resign once post-earthquake recovery measures were ‘on track to a certain extent’. This was enough to placate the DPJ rebels and the no-confidence motion failed 293–152.

However, neither the no-confidence move nor the machinations of the Ozawa and Hatoyama groupings in the DPJ had resonated well with the public. Not all public opinion polls are created equal in Japan, but a telling result from one on a popular morning TV news show at this time
indicated that amongst the DPJ the enigmatic ‘Nobody’ came top as to who was the most suitable DPJ politician to follow PM Kan.

Following this rather dramatic week, it seemed to many that PM Kan was now a lame duck. The revelation that around 80 DPJ MPs had been willing to back an opposition vote against their own party leader was clear evidence of internal ideological fissures that had previously been papered over so long as the party leadership appeared to have a fairly firm grip on the political machinery. (Although not as publicly discussed, the LDP had fault lines of its own and its most progressive elements could find natural bedfellows in the DPJ’s liberal wing.)

On 19 June, at a meeting with senior party and government figures, PM Kan laid down three conditions that he said needed to be fulfilled before he would consider resigning. These were: i) passage of a second supplementary budget through the Diet; ii) passage of a bill to issue deficit-covering government bonds; and iii) passage of a ‘feed-in tariff’ bill to promote renewable energy. The ‘feed-in tariff’ legislation had been approved by the cabinet earlier in the year, but since then there had been no further progress, partly due to opposition from those parts of the business sector and certain MPs who had cosy ties with the energy utilities and their strong lobby.

Outside of political circles, key business leaders had by the start of the summer of 2011 turned against Kan even though he had initially been perceived as being more business-friendly than his predecessor. However, Kan’s order to shut down the big Hamaoka nuclear power station southwest of Tokyo over safety concerns in the wake of the 11 March disasters suggested (correctly as it transpired) that the prime minister was taking an increasingly negative view of nuclear power and that his quest for a new national energy policy was a threat to the comfortable status quo. Additionally, Kan’s post-disaster decision to not only back-peddle on a previous decision to cut corporate taxes, but to actually increase them (even if only temporarily), had done little to endear him to Japan’s business sector.

*PM Kan wrong-foots opponents, buys himself more time*

On 27 June, Naoto Kan surprised both the leadership of his own party and of the main opposition LDP with a small-scale cabinet reshuffle. Political uproar notwithstanding, there were two important moves within the reshuffle. Goshi Hosono, a special adviser to the
prime minister and a man positively evaluated by the public for his post-disaster performance, as well as being a likely future DPJ leader, was appointed state minister in charge of dealing with the crisis at the Fukushima-Daiichi nuclear power station. Secondly, a new ministerial post, in charge of post-disaster reconstruction, also emerged as part of the reshuffle, and this portfolio went to Environment Minister Ryu Matsumoto.

The formal appointment of Matsumoto meant that the government’s new ‘headquarters’ for rebuilding the disaster-stricken north-eastern region could get to work after a law outlining Japan’s new structure for rebuilding the Tohoku region came into force the previous week. The new law paved the way for the setting up (in 2012) of a government agency to oversee reconstruction measures, a function that the headquarters would cover in the interim period, in addition to allowing the creation of the new ministerial post.

The minor reshuffle clearly angered those who had expected Kan to go quickly and quietly following his 2 June statement, but the prime minister was playing a poor hand pretty well. Although by this point he had few supporters within the upper echelons of the party hierarchy, it was clear that he intended to stand down on his own terms and not terms dictated by others.

Barely a week after being appointed Japan’s reconstruction minister, Ryu Matsumoto resigned on 5 July to take responsibility for remarks he made during his first visit to disaster-stricken Iwate and Miyagi prefectures. Heavily played up in the media and online, the minister’s remarks appear to have offended many people affected by the March 11 triple disaster.

While Matsumoto’s resignation was another blow to PM Kan, it was never going to push the PM into resigning by itself. Ironically, at this stage it appears that many MPs had come to believe that advancing the legislation cited by Kan as the conditions for his exit was the quickest way to bring about a change at the helm. Both the ruling and opposition camps agreed to convene a Lower House budget committee meeting on 6 July, resuming a parliamentary session that had been on hold for a

14. PM Kan appointed senior vice-minister for reconstruction Tatsuo Hirano (himself just appointed to that position in the late June mini-reshuffle) to replace his former boss.
fortnight. The LDP made its now obligatory weekly call for Kan to step down, this time to take responsibility for having appointed Matsumoto just the week before, but these repeated calls were widely seen as being merely so much hot air, revealing the opposition camp’s relative weakness by lacking any real coercive power.

Although the Kan cabinet’s popularity rating was now on the wrong side of the 20% mark, there was still no counterbalancing ringing endorsement of the opposition, or a clear idea as to who would make an effective replacement for PM Kan. By mid-August opinion polls showed that the Kan cabinet’s support level had dropped considerably below 20% and Kan had already discussed preparations for his resignation and for the party presidential election to choose his successor with the party’s secretary-general, Okada.

Exit Kan, enter Noda

On 26 August, the last part of the conditions that Kan had insisted were necessary before he would resign were completed with the passage in the Diet of two key pieces of legislation: a bill to allow the government to issue deficit-covering bonds in FY 2011, and a bill to promote the use of renewable energy. (The cabinet had already agreed on 5 July on the second supplementary budget for FY 2011 [¥2 trillion] to finance post-disaster relief work and this had subsequently passed through the Diet.) Consequently, PM Kan announced he would finally resign after the snap party presidential election on 29 August at which his successor would be chosen.

But because time was short, the crowded field of candidates only had the weekend in which to delve into serious policy debate ahead of the 29 August poll and thus the focus was more on who had the best chance of uniting the DPJ and working with the opposition camp than on deeper, wide-ranging policy issues.

Finance Minister Yoshihiko Noda emerged victorious from the group of five contenders in the poll after a second-round run-off in which he defeated METI minister Banri Kaieda. There were few major differences between the candidates’ main campaign positions: all said they aimed to reduce Japan’s dependence on nuclear power and all said they saw the Japan–US alliance as the cornerstone of the nation’s diplomacy. Noda’s victory meant that he would serve out Kan’s term as DPJ party president, which was set to expire in September 2012.
At the centre of the leadership election was, once again, a struggle for power within the DPJ, rather than a debate over policies. The power struggle was mostly between pro- and anti-Ichiro Ozawa groupings; although weaker than in his heyday, Ozawa remained the head of the largest intra-party faction, and still had clout in closed-door, back-room dealing. Nonetheless, although Kaieda got the most votes in the first round, the other four candidates instructed their supporters to vote for Noda in the second round, effectively blocking Ozawa from being able to pull the new leader’s strings. (Ozawa himself was ineligible to vote in the election because his party membership had been suspended due to a political funds scandal, but he still held sway over more than 100 DPJ parliamentarians.) This was the third party-presidential election since the DPJ came to power in 2009 that Ozawa had failed to work to his advantage, suggesting that his backroom influence was finally on the wane.
As a former finance minister PM Noda was known to back in principle a tax increase to help fund reconstruction efforts in the Tohoku region, but had toned down his previously staunch support for it ahead of the party presidential poll. (His conviction over the need for tax increases would however reappear later in the year.) And while Noda bent with the post-11 March wind regarding the need for Japan to reduce its reliance on nuclear energy, it was unclear how committed he was to renewable energy. Internationally, Noda took office of the mind that Japan needed to open up for trade and investment purposes and that Japan should aim to join the TPP talks.

In announcing his revamped cabinet line-up and reshuffle of senior party positions on 2 September it was clear that Noda was keen to mend fences with the loose grouping of DPJ MPs who backed Ozawa, and certain appointments reflected the new prime minister’s desire to shore up party unity. Nonetheless, the new cabinet’s focus was on post-11 March recovery, the ongoing nuclear crisis and the effects of the strong yen. The significant number of hitherto low-key MPs in the cabinet symbolised efforts by Noda to present a new face of the DPJ to the public; the other side of the coin was that the new cabinet was relatively inexperienced.

Like his predecessor, Noda was not a hereditary politician, had little in the way of substantial assets, and in contrast to many elite-background MPs had an understanding of what life as an ‘average citizen’ entailed. Although Noda was a graduate of Waseda University who then studied at the Matsushita Institute of Government and Management before becoming a local assemblyman in the 1980s he had worked as a home tutor and gas-meter checker. He was also the first DPJ party president not to have been one of the party’s founding fathers.

One of Noda’s first moves at helping restore party unity was the appointment of the consensus-seeking Azuma Koshiishi, chairman of the DPJ’s Upper House caucus, as DPJ secretary general, the No. 2 party post under Noda. Ex-Foreign-Minister – and failed party presidential candidate.

15. The Matsushita Institute of Government and Management was established in 1979 by Panasonic’s founder, Konosuke Matsushita. According to the institute’s website (http://www.mskj.or.jp), its core principle is ‘With deep love for our country and our people, we seek to contribute to the peace, happiness, and prosperity of all humankind by searching for guiding principles of government and management based on a new vision of the nature of human beings.’ As of April 2011, 45% of its graduates were involved in politics in some manner. PM Noda was one of the institute’s first graduates and the first to become prime minister.
candidate – Seiji Maehara was made chairman of the party’s policy research council. For the post of Diet affairs chief, Noda picked Hirofumi Hirano, known for being close to ex-PM Yukio Hatoyama.

But ultimately, the problems that had dogged Kan had not gone away. Like the main opposition LDP, the DPJ has no true ideological centre; pro- and anti-Ozawa fissure aside, the party has members who run the range of the political spectrum. While in opposition it was clear that the DPJ was the main anti-LDP party, but once it had attained power for itself it wasn’t clear to voters what the party really stood for, contributing to increased political apathy amongst the electorate. Although the day-to-day bureaucratic machinery that ensures the country runs smoothly continued to tick over, the biggest challenge facing Noda was that of articulating a vision for the country to address the stagnation into which it had already drifted prior to the triple disaster of 11 March.

The regions revolt

With Kan out of the picture the political temperature in Tokyo began to drop. A short period of relative détente followed on the national stage with co-operation between the main political parties on reconstruction- and budget-related legislation in the Diet. But in the provinces life continued according to differing agendas and local elections with potentially far-reaching consequences for national politics took place on 27 November. By this point, the explosive issue of raising both income and consumption taxes had also reappeared on the national agenda.

The citizens of Japan’s second largest city, Osaka, and the prefecture of the same name snubbed both major parties in mayoral and gubernatorial elections on 27 November. Candidates who sought to trim the city and prefecture’s large bureaucracy and merge the city and prefecture into one administrative entity beat more traditional candidates who had been backed by both the DPJ and the LDP. Local elections are won on local issues, but the high level of support for the outsider candidates, as well as the sharply increased turnout, suggested that Japan’s voter apathy could be overcome if the citizenry was presented with fresh ideas.

The Osaka governor, Toru Hashimoto, who also heads the regional party Osaka Ishin no Kai (Osaka Restoration Association), had stepped down as governor to run as mayor, comfortably winning that election. Osaka Ishin no Kai’s secretary-general, Ichiro Matsui, was elected to replace his boss as governor. Although prefectural governors are usu-
ally more powerful than city mayors in Japan, in this case it was clear that Hashimoto was the one calling the shots by overseeing a task force to consolidate growth strategies, hitherto compiled separately by the prefectural and city governments.

The small opposition Minna no Tō (Your Party) was the only national political party to back the outsider candidates in the Osaka local elections and the party’s leader, Yoshimi Watanabe, a former LDP cabinet minister, suggested that he would continue to cooperate with Hashimoto.

At the time of his victory, Osaka Ishin no Kai only had members in the Osaka prefectural assembly. Hashimoto’s reform drive led him to say that he would consider fielding national candidates in the next Lower House elections. The issue of whether the central government would be friendly or hostile to Hashimoto in the run-up to the next Lower House elections – due by summer 2013 at the latest – became an important factor in the national political debate. (In May 2012 Tokyo governor Shintaro Ishihara said that he would emulate Hashimoto by setting up a ‘school for prospective politicians’ following the establishment of such an institution in Osaka earlier that year.) Given the enthusiasm for Hashimoto among Osaka’s citizens, and the perception that he offered ‘leadership’ at a time when that quality was deemed lacking at the national level by a fair share of the public, this threatened to pose a significant electoral threat for both the DPJ and LDP. Hashimoto’s policy proposals were fairly radical, and attracted criticism for being ill-conceived and unrealistic. Among Hashimoto’s ideas were plans to hold national elections for prime minister, and to drastically reduce the number of MPs by doing away with the Upper House all together.16

At the end of the year, nine MPs quit the ruling DPJ in protest over plans to raise the consumption tax, a sign that party unity was weakening. The departing MPs formed a new party called Kizuna – a term that means ‘solidarity’ or ‘bonds between people’ – which gained new popularity nationwide following the 11 March disasters. Kizuna’s policy platform also stated that the party was against Japan’s participation in the TPP free trade negotiations.

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16. Hashimoto launched a national political party, Nihon Ishin no Kai (Japan Restoration Party), in late September 2012. Tokyo governor Ishihara surprised many the following month when he announced on 25 October that he would resign as governor in a bid to return to national politics. Ishihara and Hashimoto joined forces in November 2012, with Ishihara becoming the leader of the Japan Restoration Party, and Hashimoto his deputy.
2012: tax issues to the fore

As shown by the Kizuna breakaway in late December, the main political issue facing the Diet as the new year got under way was PM Noda’s controversial proposal to raise the domestic consumption tax (then 5%) to address Japan’s grim financial situation. However, Noda faced criticism from both within his own DPJ and from some members of junior coalition partner Kokumin Shintō (People’s New Party) over the issue.

Noda said that a consumption tax increase would require a public mandate and thus a general election. Polls indicated that the public wanted an election before tax-rise legislation was finalised rather than afterwards, as Noda was planning, but as a former finance minister he was always in favour of the tax increase, to the point where he later stated that he would stake his political life on the issue.17

In March, Noda allowed his policy chief to oversee some revisions to the proposed legislation, including the establishment of a ‘revenue agency’ to oversee taxes and social security premiums in a coordinated manner, in an effort to achieve intraparty consensus, though this was only partially successful. On 28 March, the DPJ endorsed legislation to increase the consumption tax from 5 to 10% by October 2015, despite public dissension from a number of MPs. The draft bill was then approved at a cabinet meeting on 30 March ahead of its submission to the Diet.

Former DPJ leader Ichiro Ozawa and his supporters within the party were staunchly opposed to the planned tax rise, warning of harm to the economy, still struggling to recover from the triple disaster. Three senior vice-ministers and one parliamentary secretary, all loyal to Ozawa, stepped down in protest following the submission of the legislation to the Diet. In a coordinated move, six other Ozawa loyalists tendered their resignations from important party posts. However, other Ozawa group members holding junior ministerial posts did not follow suit, showing that even the main group of ‘dissenters’ was itself divided. Although Ozawa had said that he believed the tax rise would hurt the economy and that ‘other things’ needed to be done first, he had been vague about precisely what these things were.

17. See the Asahi Shimbun’s poll of 15/1/2012 for example: http://mansfieldfdn.org/program/research-education-and-communication/Asian-opinion-poll-database/listofpolls/2012-polls/asahi-shimbun-regular-public-opinion-poll-1152012/. An increase in the consumption tax had long been a goal for Ministry of Finance bureaucrats.
The cabinet decision also led to turmoil in the DPJ’s last coalition partner, the tiny Kokumin Shintō. On 5 April, the party’s secretary-general announced that the party’s leader, Shizuka Kamei, who was opposed to the tax increase and who had unilaterally announced the party would leave the coalition, would in fact be leaving the party instead. On 6 April, the sole PNP member in the cabinet, Financial Services Minister Shozaburo Jimi, was announced as the party’s new leader.

On 26 April, the Tokyo District Court ruled that Ozawa, who had been accused of violating the Political Funds Control Law, was not guilty, though this judgement was appealed by the prosecutors. The court’s decision paved the way for his return to the party’s fold, increasing the potential for further turmoil within the ruling party due to Ozawa and his followers’ opposition to the consumption-tax-increase legislation that had by then been submitted to the Diet.

On 4 June, Noda carried out a minor cabinet reshuffle, part of which involved the replacement of two ministers who had received non-binding censure motions in the Upper House on 20 April. Noda’s move was all part of the negotiations that his administration was conducting with the opposition as he sought a way to get the consumption tax legislation through the Diet. After months of wrangling, the ruling DPJ and main opposition LDP and New Kōmeitō parties finally reached a compromise on the controversial consumption tax increase issue, and legislation to increase the consumption tax from 5 to 8% in 2014 and then again to 10% in 2015 was submitted to the Diet on 20 June.

### Ozawa breaks ranks

In addition to the cabinet mini-reshuffle, in order to win the opposition’s support the DPJ had to scrap two key reform objectives regarding social welfare issues, and the scale of the compromise angered the anti-tax increase MPs within the DPJ, most of whom were closely linked to Ozawa and Hatoyama. Efforts to forge an internal compromise made little headway, and 57 DPJ rebels voted against the legislation on social-security and tax reforms in the House of Representatives on 26 June. A further 16 DPJ MPs abstained. In spite of the revolt, the bill passed by 363 to 96 votes, backed as it was by the ruling coalition and the two larg-

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18. Ozawa had been accused of conspiring with his former secretaries to put false entries in the financial reports that the organisation called Rikuzankai, which managed Ozawa’s political funds, had submitted in 2004 and 2005.
est opposition parties. (Other smaller opposition parties voted against the tax increase but they lacked the numbers to make a difference.)

Ozawa had said that he would leave the DPJ with his supporters and form a new party in protest at the consumption-tax-legislation vote, and on 2 July he and 48 like-minded MPs announced that they had handed in their resignations to the DPJ. Ozawa subsequently formed a new party on 11 July. Going under the rather unwieldy title of Kokumin no Seikatsu ga Daiichi (People’s Life First), the new party began life with 49 MPs (37 from the Lower House and 12 from the Upper). Announcing his new party, Ozawa said that it would focus on fiscal reform rather than increasing taxes and that it would also adopt an anti-nuclear power stance in an effort to capitalise on the widespread hostility to nuclear power that had spread throughout Japan since the Fukushima-Daiichi crisis began.19

However, although Ozawa’s new party became the third largest in the Diet in numerical terms, many of its MPs were first-termers with little political experience and weak support bases. In order to throw his party’s weight around in the Diet, Ozawa needed the cooperation of other opposition parties but initial signs suggested that few of them had much interest in joining forces with the one-time strongman of Japanese politics.

The departure of Ozawa and his followers meant that the ruling coalition’s majority in the Lower House was reduced to 17. And although the DPJ remained the largest political group in the Upper House, its overall position was further weakened when four more DPJ MPs announced that they would leave the party in mid-July. All of these moves caused the coalition to be increasingly reliant on cooperating with the main opposition LDP and New Kōmeitō parties with whom it had forged a tripartite cooperation deal in June to ensure the passage of the consumption tax and social security legislation.

PM Noda finally achieved his key policy goal of raising Japan’s consumption tax from 5 to 10% on 10 August following a vote in favour of the legislation in the Upper House. This was the first increase in the consumption tax since 1997, and a notable achievement in itself, but

19. Kokumin no Seikatsu ga Daiichi turned out to have a short lifespan as Ozawa folded it into the newly established Nihon Mirai no Tō (Tomorrow Party of Japan) in late November 2012, ahead of the 16 December 2012 House of Representatives elections.
Noda had had to agree to opposition demands to call a general election “sometime soon” to ensure their cooperation in passing the legislation.\(^2\)

**What are the implications for the future?**

The events of 11 March 2011 had little immediate bearing on the state of Japanese politics; the window of bipartisanship that opened on 11 March had closed by mid-April, to public dismay, and the Diet returned to the politicking that had affected parliamentary work for close to a year. Naoto Kan was already on his way out; the triple disaster delayed his departure by a few months at best.

Kan was, however, able to use the extension to his political life to introduce potentially far-reaching legislation, and to make a commitment to reduce the nation’s dependence on nuclear energy in the medium term, before he resigned in late August 2011. Japan shifted from being basically a pro-nuclear nation to one that had a more ambiguous relationship with nuclear energy in which powerful regional political figures like Toru Hashimoto called for Japan to give up its dependence on nuclear energy, albeit in a rather opportunistic manner, and major cultural icons such as author and Nobel Prize winner Kenzaburo Oe, and musician/composer Ryuichi Sakamoto, emerged as key figures in a nationwide anti-nuclear movement.

Naturally, the Reconstruction Agency and other disaster-related legislation would not have been introduced had the triple disaster not occurred. For example on 1 March 2012, the House of Representatives passed a bill to help disaster-stricken Fukushima Prefecture by making the central government carry out public-works projects in the prefecture, and offering special tax exemptions for businesses that had offices in the evacuation zones. And the public standing of two ministers still in their 40s, Yukio Edano, who as chief cabinet secretary was the daily face of the government in the aftermath of the 11 March disaster, and nuclear recovery minister Goshi Hosono unquestionably rose.

Although Kan came under heavy criticism from across the political spectrum, no one from either the DPJ or the LDP came up with a viable policy alternative to rebuilding the earthquake-stricken region.

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20. By November the DPJ’s Lower House majority had dropped to single figures following further defections. Although this was far from being the sole reason for his 16 November decision to dissolve the Lower House, it was an important factor. House of Representatives elections were set for 16 December 2012.
that radically differed from the ideas which Kan and his advisors had put forward. Nonetheless, relentless negative media portrayals of Kan and his cabinet, plus the perception that Kan himself had little support within the party, managed to reduce his popularity ratings to the point where he had little choice but to go.

Kan’s successor, Noda, was initially successful in bridging internal party divisions, but his determination to press ahead with the controversial consumption-tax-increase legislation caused a considerable amount of upset within the party. Noda had not been Kan’s obvious successor, but nor was his emergence a surprise, and several ministers who had showed their ability in Kan’s cabinets were retained when Noda moved into the top seat.

In spite of his political savvy, Noda generally found it difficult to achieve constructive dialogue with the main opposition parties even on areas of policy where they agreed. He was, however, able to eventually make a deal in August 2012 with the LDP and New Kōmeitō in which he secured their support in passing legislation to raise the consumption tax from 5 to 10%.\(^\text{21}\)

From late 2011 onwards, polls showed low levels of support for both the DPJ and the LDP alike, yet the latter stuck to its uncooperative stance in the expectation that it would be the DPJ – as the ruling party – which would receive the lion’s share of public opprobrium for failing to push forward a coherent domestic political agenda.\(^\text{22}\)

As for foreign policy, in the immediate aftermath of the crisis, Japan’s relations with neighbouring countries improved temporarily with China, Russia and South Korea providing aid and disaster-relief assistance. The disasters shifted Japan’s priorities to post-disaster crisis and relief management and reconstruction efforts. However, Japan’s foreign-policy challenges remain unchanged in the long term. The alliance with the United States was reinforced as Washington played an active support role during

\(^{21}\). Increasing the consumption tax is a thorny issue that has never been popular since it first appeared on the agenda in the 1990s. For more details of the fiscal background to the consumption tax increase, please see Chapter 4. The price that PM Noda had to pay, however, was to promise to dissolve the Lower House and hold elections “sometime soon”. The precise meaning of “sometime soon” then became an issue in itself as PM Noda refrained from explaining what he had in mind when saying this.

\(^{22}\). Ex-PM Shinzo Abe’s victory in the LDP’s September 2012 party-presidential elections finally boosted the party’s opinion poll ratings, giving it a clear lead over the DPJ. Nonetheless, the percentage of poll respondents who said they didn’t support any of the major parties remained high.
the crisis by launching a large rescue and relief operation conspicuously baptised *tomodachi* (‘friends’). Thus, the US was able to demonstrate with concrete deeds the reality and the usefulness of the bilateral security alliance, even though the issue of the US military presence in parts of Japan remains a sensitive issue that occasionally flares up.

Relations with China will always have a central place in Japan’s foreign policy, and the underlying bilateral tensions were never going to be dissipated by a short-term show of friendship following the triple disaster. The long-term trend of the Chinese military build-up will continue to be carefully assessed by Japanese defence experts for its potential to upset the delicate regional balance of power. Despite the symbolic assistance provided by North Korea in the aftermath of the earthquake, relations with Pyongyang will still focus on creating an atmosphere in which the six-party talks can be restarted, driven at the bilateral level by the abduction and missile issues. With South Korea, economic and (to a lesser extent) security relations will likely incrementally continue to strengthen – with the encouragement of Washington – but historical and territorial issues remain occasional irritants, as demonstrated by the publication of new Japanese school textbooks that were criticized by the Republic of Korea’s President Lee for presenting the Takeshima/Dokdo islands as Japanese territory. President Lee’s visit to the islands in August 2012, the first by a South Korean president, led to the temporary recall to Tokyo of the Japanese ambassador to Seoul. Relations with Russia have at their centre the longstanding issue of the unresolved Northern Territories/Southern Kuriles, and despite renewed bilateral cooperation over the nuclear crisis, the bilateral relationship with Moscow will continue to be complex.

And when it came to international trade, the government’s liberalisation and free trade agenda had already begun to emerge in late 2010, following its adoption of a new policy towards establishing comprehensive economic partnerships. This had taken further shape in early 2011 before the triple disaster following the speech by PM Kan at the World Economic Forum in Davos in late January 2011.

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the prime minister explicitly referred to his goal of achieving a ‘third opening’ of Japan and of the need to promote economic partnerships to underpin this aim.

The triple disaster in March 2011 naturally put a brake on this process. Although PM Noda had a similar mindset to the free trade agenda as his predecessor, opposition towards too much trade liberalisation exists in a variety of sectors in Japan, and also cuts across party political lines. Most disquiet focuses on possible Japanese participation in the Trans-Pacific Partnership, and the negative prospects for the nation’s agriculture that this may entail. It is still unclear if the triple disaster will lead to a reinforcement of the need to revive PM Kan’s call for a ‘third opening’, or if the need for reconstruction to focus on sensitive, core sectors such as fisheries and agriculture will serve to postpone decisions on free trade matters.

Significantly, and in contrast to Europe, Japan has not seen the rise of any serious political extremism, either on the left or the right, following the collapse of the economic bubble at the start of the 1990s. It should not be forgotten that the Japan of the 1960s and early 1970s had extreme political groups and widespread civil unrest just like Europe and the US, but that legacy on both left and right is now very much dormant.

A poll in January–February 2012 organised by the cabinet office showed there was widespread discontent with the entire political edifice. Nearly 82% of those questioned said that they didn’t think that the central government’s policy-making process took any notice of public opinion. This is the highest level of disquiet since the government began asking this question in 1982. The fact that senior figures in the DPJ hierarchy could appear in public or on television and openly discuss the fate and possible resignation date of PM Kan without fear of reprimand or reprisal not long after the 11 March crisis is widely seen as a lack of respect which is reflected by the populace at large in the way it feels about the MPs themselves.\footnote{The poll of 10,000 people was conducted in January–February 2012 and the results were announced on 2 April 2012. For the relevant section, please see: ‘Shakai ishiki ni kansuru yoronchoşa, zu 26’, http://www8.cao.go.jp/survey/h23/h23-shakai/zh/z26.html.}

Another issue that needs closer scrutiny in Japanese politics is the way in which ministers are sometimes forced to resign over ‘inappropriate’ comments. The example of then Reconstruction Minister
Ryu Matsumoto, who resigned on 5 July 2011, is a case in point. While Matsumoto’s comments may have made him appear a tad arrogant and unsympathetic towards the victims of the 11 March disaster – qualities that were admittedly not becoming in a reconstruction minister – whether they were worth resigning over was debatable. Matsumoto’s resignation had echoes of a previous resignation from Kan’s cabinet when then Justice Minister Yanagida stepped down in November 2010 over poorly chosen, but hardly earth-shattering, comments to a group of local constituents regarding Diet affairs and the manner in which they were conducted. Neither of these incidents would likely have been seen as resigning matters in Europe.

The widespread national disquiet with the political system helps explain why the manner in which the LDP operated in opposition to the DPJ was so risky, for its actions were liable to interpretation by the public as being obstructionist rather than constructive. The emergence of a strong regional leader in the form of Toru Hashimoto in the mayoral elections in Japan’s second largest city Osaka, in late 2011, coincided with the appearance of other ostensibly reformist political forces that were popular in the regions where they were active, suggesting that there was more trust in local politicians to solve local problems than in the central government. The popularity of these forces correlates directly with the wider disquiet expressed in the cabinet office opinion poll.

When the DPJ came to power many thought that its emergence as a ruling party would herald the foundations of a true two-party system in Japan after over half a century of almost continual rule by the LDP. However, this did not turn out to be the case, and the DPJ’s defeat in the 2010 Upper House election plunged the Diet back into the pool of political paralysis that many had hoped the party’s victory the previous summer would drain. Except on certain social issues where the DPJ is more progressive and internationally aware, there is little doctrinal difference between the DPJ and the LDP. Under the circumstances of political gridlock mixed with a serious post-earthquake scenario and calls for national unity it was conceivable that a new, large, centrist single party – akin to the old LDP in form if not in nature – could emerge should a DPJ–LDP grand coalition come about, as numerous influential people had hoped during the course of 2011. However, a grand coalition, while always possessing the potential
to implode, would not have been a reassuring signpost along the road to a true two-party political landscape. But it may be that this signpost now points in a different direction and that there needs to be further upheaval in domestic politics before a state of equilibrium can be achieved. Rather than consolidation by the two main parties, late 2011 and 2012 saw an increase in the number of political parties as groups of MPs successively left the DPJ to form first the Kizuna Party and then the slightly more substantial Kokumin no Seikatsu ga Daiichi.26 Several other MPs left the DPJ to try to establish a new group with a strong environmental policy platform, and it will be worth monitoring developments in this area following the rise of a grassroots-led anti-nuclear movement in the wake of the Fukushima-Daiichi crisis. The appeal of this movement reached far beyond the ideologically committed and into the lives of many tens of thousands of ‘ordinary’ citizens. If a ‘green’ party is to establish a viable support base then an ability on the part of its leadership to reach into the mainstream in a similar manner will be necessary.

In the medium term, it is thus conceivable that the Japanese political system will continue to move away from the two-party system that had seemed to be emerging in the summer of 2009. The DPJ’s raison d’être when in opposition was that it simply offered an alternative to the LDP, from which the public had increasingly turned away following PM Koizumi’s decision to step down in 2006. In a way the DPJ itself was a coalition of political groupings determined to seize power from the LDP. But once that had been achieved, reconciling the different ambitions and policy goals within the DPJ became increasingly difficult, and this would have likely been the case irrespective of whether the Great East Japan Earthquake had struck in March 2011.

Even against this backdrop however, it is too early to say whether the emergence of local political movements in Osaka, Nagoya and other parts of the country, combined with the proliferation of smaller national political parties, is the beginning of a true redrawing of the

26. Small groups of MPs had similarly broken away from the LDP to form new parties after the LDP’s defeat in the Lower House elections of August 2009. Reflecting the volatility of the domestic political environment, both the Kizuna Party and Kokumin no Seikatsu ga Daichi were incorporated into the newly established Nihon Mirai no Tō (Tomorrow Party of Japan) in late November 2012, ahead of the 16 December 2012 House of Representatives elections.
national political landscape or merely another manifestation of Japanese political factionalism. Both the two main parties are still relatively broad churches; for true political upheaval on the national stage they – and some of the smaller parties – would have to dissipate and re-emerge along ideological lines that are more sharply defined than at present. Tax and social-security, free trade, nuclear-power and green-energy policies are several of the new ideological fault lines that emerged once the DPJ took power, and are unlikely to stray far from the centre of the domestic political agenda in the years ahead irrespective of whichever party or coalition of parties holds the political reins. This political realignment process will not be completed in the short term, however, and one needs to look beyond the immediate aftermath of the December 2012 Lower House elections to at least those that follow (due by December 2016) before a more fundamental realignment occurs.27

27. The 16 December 2012 House of Representatives elections took place just as this book was in its final stage of preparation. Although the LDP surprised many with the scale of its victory, winning 294 seats, and the DPJ suffered heavy losses, the vote was far from being an endorsement of the LDP. The LDP received nearly two million fewer votes in single-seat districts than it had done in 2009, and voter turnout was the lowest on record, down a full 10 percentage points from the August 2009 election which had returned the DPJ with a landslide. The LDP also benefitted immensely from the proliferation of new parties in the weeks before the elections, which contributed to uncertainty and confusion among voters who were dissatisfied with both the LDP and the DPJ. It has been argued that this proliferation split the anti-LDP vote more than the anti-incumbent party vote, to the DPJ’s detriment and the LDP’s great benefit. For a comprehensive statistical analysis of the election results see e.g. ‘The Japanese General Election of 2012: Sometimes, Lucky is Better than Popular’ by Steven R. Reed, Ethan Scheiner, Daniel M. Smith, and Michael Thies at http://themonkeycage.org/blog/2012/12/27/the-japanese-general-election-of-2012-sometimes-lucky-is-better-than-popular/.
CHAPTER FOUR

Has 11 March 2011 ushered in a new sense of fiscal responsibility?

Rene Duignan

Introduction

In decades to come, few economic historians will regard the 11 March 2011 disasters as a turning point for the Japanese economy, despite the numerous books, articles and TV commentators boldly predicting that this monumental tragedy would somehow create a blank page on which to re-write a new economic future for Japan. As time slowly passes from the date of the triple disaster, sadly we can already testify that there are few inspirational tales of economic ‘rebirth’ to tell. Contrary to the flow of a classic storyteller’s narrative arc, where disaster is followed by stoic bravery, catharsis and ultimately redemption, one could not assume that the devastated parts of the Tohoku region would either automatically be rebuilt into a hub for innovative industry, or become a network of high-tech, eco-friendly, disaster-resistant towns and villages.

At the risk of making a prematurely pessimistic assessment of a reconstruction process that is expected to take at least ten years, it does seem that these high expectations and expensive plans were unfair and unrealistic. On the human level, could we ever really expect that fishermen, farmers or the unemployed in Tohoku would suddenly become IT business entrepreneurs? In the reality of rubble and radiation, tens of thousands of Tohoku residents would never even be able to return to their homes due to either the scale of devastation or the elevated radiation levels in parts of Fukushima Prefecture. One 93-year-old man politely wrote in his suicide note that the only place he now wanted to be evacuated to was the graveyard.

At the other extreme, the media’s economic doomsday scenarios did not materialise either. Japanese companies did not scramble to shift
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their domestic manufacturing operations overseas after the damage caused by supply-chain disruptions. Nor did the Japanese government collapse into a sovereign debt crisis with Tohoku reconstruction costs acting as the fiscal ‘tipping point’. The disaster would not prompt any major changes to Japan’s industrial structure. Indeed when we review the statistics for 2011 later in this chapter, we shall find that the economic damage was surprisingly limited. However, if we look beyond the shallow representations of economic statistics and media commentaries, to explore the exceptional spirit of solidarity amongst Japanese citizens in the post-disaster days, we can possibly begin to sense a major economic change resulting from the tragedy. This was a turning point not mentioned in rebirth/doomsday hyperbole, but one that would slowly emerge from the damage and unspoken pain of ordinary Japanese for whom life would never quite be the same again. While natural disasters are inevitable fate, fiscal disasters are avoidable folly.

After two decades of stagnant growth and rising public debt, many economists reflexively warn that Japan seems irrevocably committed to a slow downhill march to fiscal insolvency. In the clearest possible indication of fiscal distress, Japanese government bond issuance has surpassed tax revenue in recent years, primarily due to the relentless rise of social-security spending caused by an ageing population. In simple terms, this means that Japan is systematically spending twice the amount it is earning in tax revenue, implying that the government is either spending far too much or taxing far too little. It is therefore little surprise that Japan’s fiscal debt-to-GDP ratio is growing at a dangerously rapid pace. Despite Japan’s gross fiscal debt rising to over 212% of GDP, the worst ratio among developed countries, the consumption tax has

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1. The ‘lost decade’ originally referred to the years 1991–2000. Recently, the 2001–10 decade has begun to be included in the same breath so that the whole period of the 1990s and 2000s is sometimes referred to as the ‘lost decades’ by those who are prone to cliché usage.

2. Social-security spending in Japan’s FY 2012 general account budget is ¥26.4 trillion out of the total of ¥90.3 trillion. Social security spending in the general budget is increasing by more than ¥1 trillion every year due to the increasing welfare demands of the ageing population. The percentage of those aged 65 and over rose from 5.7% in 1960 to 9.1% in 1980, 17.4% in 2000 to 23.0% in 2010.

3. Japan’s total public spending as a percentage of GDP is consistently one of the lowest amongst OECD countries. Therefore it is fair to make the general assumption that profligate government spending is not the cause of Japan’s high budget deficits. The high spending that is required in the social-welfare sector is largely unavoidable due to a rapidly ageing population.
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been a taboo that most prime ministers have avoided since the last time the tax was raised in 1997.⁴ In the 15 years since the last consumption-tax increase, Japan’s GDP has contracted 10% in nominal terms while long-term debt at the national and local levels has doubled. Yet Japan has had little political appetite for attempting to defuse this ticking fiscal time bomb. Even Junichiro Koizumi, the most popular and longest serving prime minister of the past 40 years, did not dare to attempt to raise the consumption tax for fear of a voter backlash.⁵ A rare exception to this pragmatic rule of political self-preservation was Prime Minister Naoto Kan who highlighted the fiscal necessity of raising the consumption tax after he became leader of the Democratic Party of Japan (DPJ) in June 2010. Even though it was not an election pledge in the DPJ’s 2009 manifesto, PM Kan’s bold rhetoric was blamed for damaging his own popularity as well as being the main reason for the government’s defeat in the July 2010 Upper House elections.⁶ PM Kan learned his lesson and did not push for a consumption-tax raise again during the rest of his tenure as Japan’s leader.

I argue that the sheer scale of the 11 March 2011 tragedy has helped to finally awaken an unprecedented sense of national solidarity and a public understanding of Japan’s collective fiscal responsibility; the first consensus was that the massive costs of rebuilding Tohoku could not simply be pushed on to future generations. After the disaster, Japanese people could finally see that the country could not continue to walk down the road to fiscal ruin. It is a rare occurrence in any country for opinion polls to show a clear public agreement on the necessity of raising taxes, in this case to cover Tohoku reconstruction. It is rarer still that raising taxes is ever considered to be a positive thing, but in this case, with Japan running huge deficits and with a consumption tax rise considered politically taboo, to try to hike taxes is almost heroic.⁷

⁴ According to the latest OECD 2012 Japan report, which predicts that the debt ratio will rise to 234% of GDP in 2012.
⁵ Junichiro Koizumi (Liberal Democratic Party) was prime minister of Japan between April 2001 and September 2006.
⁶ Increasing the consumption tax was in the LDP 2009 election manifesto, but was hardly seen as a vote-winning pledge.
⁷ One example is: ‘Do you agree or disagree with the idea of raising taxes in order to fund the earthquake-disaster reconstruction?’ Agree 54% – Disagree 35%. Asahi Shimbun poll (13/6/2011). Three important caveats on the use of opinion poll data: Firstly, it is often said that if government actions were to simply reflect opinion polls, there would be no need for politicians or for difficult political decisions. Therefore, I do not claim that the
This economic and moral epiphany allowed the government, under Prime Minister Yoshihiko Noda who replaced PM Kan in September 2011, to firstly introduce ‘temporary’ tax hikes to partially fund the large costs of reconstruction. This created a momentum towards awareness of the fiscal burden facing future generations, which allowed authorities to take on the biggest economic and political challenge of all, raising the consumption tax. While the clear consequence of the European sovereign debt crisis evident in the widespread media coverage warned Japan that countries cannot ignore deteriorating finances forever, the new sense of public responsibility came directly from the Tohoku disaster. If Japan were to fall into default, it would not be defaulting on foreign investors but rather its own banks, insurance companies, pension funds and ultimately its own citizens. There is no dispute that the social impact of such a fiscal crisis would be devastating.

Some critics of my argument will debate whether this policy shift was due to 11 March itself and others may argue that such a tax hike was going to happen anyway. Of course, the consumption tax would have been raised at some stage, but timing is often the key element in avoiding a fiscal crisis. Few can dispute that the consumption tax was raised earlier because of the sense of emergency after the Tohoku disaster and the subsequent huge political push that achieved legislative passage just 18 months later. Indeed, the more logical economic approach would be to not raise taxes after such a disaster because of the potential damage to domestic demand. My argument is that perhaps economic historians of Japan should look more closely at this relationship, because the move to increase the consumption tax might just be the pre-emptive strike that helps Japan avoid the social tragedy of a fiscal default.
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A surprisingly limited economic impact

Before the disasters on 11 March 2011, Japan’s economy was seen to be emerging from one of its regular shallow decelerations and was predicted to return to a modest growth path thanks to the anticipated support of robust external demand in 2011. This prospective recovery was abruptly derailed by the disaster, which resulted in instant supply-chain disruptions, electricity shortages and plunging domestic demand as citizens fell into a period of mourning and shock. Taxi drivers speak darkly of the months after the disaster and many describe it as the toughest time of their driving career. Many saw their incomes halve due to the lack of customers. Even cherry blossom parties in April 2011 were cancelled, half out of respect for the 19,000 lives lost but also because few felt comfortable sitting under beautiful blossoms on grass suspected to contain elevated levels of radioactivity. In this context, the numbers of tourist arrivals to Japan fell dramatically in 2011 and even many resident foreigners chose to abandon good jobs and flee their adopted home as the irrational fears prompted by invisible radiation caused them to panic.

To put things in context, if an earthquake of a similar magnitude to the one that rocked Tohoku were to hit Tokyo directly, the scale of

Figure 4.1: Cherry blossom parties in the month following the triple disaster were much more restrained in nature
the economic devastation would be unimaginable, but the disaster-hit prefectures of Miyagi, Iwate and Fukushima represent only 4% of Japan’s GDP. Tohoku is primarily a farming and fishing region, with some low-level manufacturing. It was this relatively minor role in manufacturing supply chains that caused the most economic disruption to Japan as a whole. Despite the media making ‘broken supply-chains’ into one of the phrases of 2011, this narrative fundamentally underestimated the flexibility and innovativeness of Japanese companies to work around missing parts. After the initial severe disruption of the first couple of months, most business supply-chains were back to normal by July and August. While car production was seriously impacted for several months, by the end of 2011, most of the pent-up demand caused by the supply disruption had been satisfied. Export levels were soon returning to normal and the media’s new key phrase was ‘V-shaped recovery’.

Even the power shortages that were experienced in many regions after the disaster were not as economically disruptive as initially feared. Japanese companies were able to shift production from weekday peak times to weekends, with few workers complaining about the disruption caused to their family lives. It is questionable if this spirit of sacrifice would be so generously given in other countries. It was also remarkable how much of the population embraced the concept of energy saving. Lights were dimmed and air conditioners turned off due to a sense of national solidarity.

When these factors are considered, it is not so surprising that the negative impact on FY 2011 GDP turned out to be relatively limited in statistical terms. The pre-disaster FY 2011 growth estimate was 1.6%; after the 11 March disruption the actual result attained was 0.0%. This was a significant decline but still not comparable to the damage of the 2008–09 global financial crisis; Japanese GDP had fallen nearly 10% over the course of a year as external demand virtually collapsed due to the effects of the ‘Lehman shock.’ In the case of the March 2011 disasters, GDP growth bounced back to a rate of over 7% due to the consumer spending rebound and the sharp recovery in exports by the July–September 2011 quarter. The economy showed impressive resilience to quickly recover. In FY 2012, thanks to the stimulus effects of reconstruction spending, Japanese growth was expected to reach 2%. Reconstruction spending helped to create a useful buffer against external sector uncertainties.
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The medium-term economic impact

What about more medium-term damage to the economy? In the media, it was repeatedly explained that after 11 March, Japanese manufacturers would likely opt to transfer and diversify their production operations to low-cost emerging economies overseas. Hollowing-out is an economic bogeyman often used by the media, and sometimes even politicians, as they seek to create a stirring narrative of Japan’s industrial decline for some particular purpose. Prime drivers of hollowing-out are said to be the strong yen or the uncertainty about electricity supply stability in the case of 11 March. However, there are several weak points in these doomsday stories.

Firstly, there is never much recognition that the production that is shifted overseas will continue to produce profits to be repatriated to Japan and thus provide vital support to the current account surplus. Secondly, hollowing-out is nothing new; about one-fifth of Japanese manufacturing already takes place outside Japan. For electronics, the proportion is more than 30%, and the overseas production ratio is around 50% for the car industry. Thirdly, in terms of corporate reputation risk alone, fleeing a natural disaster like 11 March by moving production overseas looks panic-stricken at best and unpatriotic at worst. Fourthly, the logic of shifting the supply chain overseas to avoid disruption is itself quite a confused argument. Further diversification of production lines stretches the length of a chain and thus exposes operations to more and not less risk. The Thai floods in late 2011 illustrated this flawed logic because ironically some Japanese companies affected were said to have moved to Thailand after 11 March. While hollowing-out will continue to be used as a scare story, the statistics show little evidence of a surge in 2011.

There is another important industrial risk to consider. Apart from exporting finished products like cars and electronics, Japan is a major global supplier of capital goods and key components for the IT/digital sectors. Japan produces 20% of the world’s semi-conductors and 40% of the flash memory chips used in smart phones, computers and other devices. The concern after the Tohoku disaster was that South Korean and other competitors would grab this chance to take market share.

8. According to Naohiko Baba, chief economist of Goldman Sachs Japan, the amount of Japanese production overseas was at 18.1% in FY 2010 and the historical average growth of production off-shoring is 0.55%. At this pace of off-shoring, Japanese production overseas would reach a level of 23.6% by FY 2020.
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from Japan. However, due to proprietary technology and the strong competitiveness of Japanese companies, it was always unlikely that the short-term effects of the disaster would lead to a permanent substitution effect or loss of market share.

What about the impact of the disaster on Japan’s ‘New Growth Strategy’ announced with great fanfare in 2010? One of the key areas identified as having great economic potential for Japan was in the export of nuclear power technology. Following the Fukushima disaster, negotiations with prospective buyer nations like Turkey and Vietnam were suspended. However, it did not take long for Japan to resume talks with these two countries. As ‘green innovation’ was identified as an area of high potential, the disaster and energy uncertainties would appear likely to stimulate the development of renewable energy in Japan. Indeed these areas have become the key components of Japan’s latest growth strategy in the ‘Japan Revitalisation Plan’, put forward in 2012. Other areas such as inward medical tourism and increased trade with Asia, including in the field of infrastructure, are unlikely to be affected by the disaster.

One area where the triple disaster had an undisputed impact was on the nation’s trade deficit; for FY 2011 Japan recorded its first annual trade deficit since 1980 of ¥2.5 trillion or 0.5% of GDP. It was a historic result that made global headlines, including many gleeful declarations from the overseas media that this was the ‘end of an era’ and how Japan’s deficits were an indication of economic decline. To let the facts get in the way of a good story, it is obvious that the trade deficit was primarily due to the effects of the triple disaster rather than a secular or structural decline in Japanese competitiveness. It is true that import levels will remain elevated because of increased demand for oil and LNG and owing to the ongoing nuclear power uncertainties. It is also likely that imports will increase due to the need for reconstruction materials in the next year. In this context, many economists predict that Japan’s trade deficit could continue until early 2013 before it recovers. Much depends on the pace with which nuclear power stations come back on line, as resumption of atomic energy generation will cause the high level of fuel imports to fall again.

9. Japan’s total fuel imports in 2010 were valued at ¥17.4 billion but this increased by 25% to ¥21.8 trillion in 2011.
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The large fiscal burden of reconstruction

At first the huge fiscal cost of reconstruction seemed set to merely add further layers of complexity to the challenge of tackling Japan’s rising public debt. The cabinet office estimated that the costs of reconstruction would eventually reach ¥23 trillion or a massive 5% of GDP.\textsuperscript{10} The government took swift action by announcing a series of four supplementary budgets totalling ¥18 trillion (almost 4% of GDP) in the months after the disaster. The extent of the challenges faced can be illustrated by the fact that the last time Japan drafted four supplementary budgets was back in FY 1947.\textsuperscript{11} Following the 11 March disaster, several analysts and journalists warned how the cost of reconstruction could possibly be the ‘tipping point’ that pushes Japan into a fiscal crisis. One of the more exciting elements of economics in Japan is the race to identify which ‘trigger’ will eventually spark a much anticipated fiscal crisis. Speakers looking to attract a large audience in Tokyo simply use titles like ‘Triggers for Japan to be the Greece of Asia?’ Despite these fiscal concerns, many politicians believed that it was perfectly understandable if the reconstruction costs were to be added to the fiscal deficit, as the spending could hardly be classified as irresponsible.

After the resignation of PM Kan in August 2011, then Finance Minister Yoshihiko Noda was notable as the only candidate running in the DPJ leadership election who openly advocated raising taxes to fund the costs of reconstruction. Commentators ridiculed his strategy as the perfect way to finish last in an election in Japan. However, the commentators had not counted on a new age of public responsibility and realism that were inspired by the shocking events in Tohoku. In a surprise result, the unheralded Noda won against his more high-profile competitors.\textsuperscript{12}

\textsuperscript{10} The uncertain costs for bailing out TEPCO and its compensation obligations are not included in this figure. Deputy Chief Cabinet Secretary Tsuyoshi Saito explained in detail at the 22 March 2012 Reconstruction Design Global Forum: ‘The total estimated cost of damage amounts to approximately ¥16.9 trillion [according to statistics issued by the Cabinet Office on 24 June 2011]. However, the total scale of projects that will be implemented during the envisaged 10-year reconstruction period will amount to at least ¥23 trillion, of which at least ¥19 trillion is expected to be required especially for projects implemented during the five-year intensive reconstruction period up to fiscal 2015.’ See http://www.kantei.go.jp/foreign/others/201203/22speech_e.html.

\textsuperscript{11} In that year, 15 extra budgets were compiled to help the recovery after World War II.

\textsuperscript{12} In the party presidential election campaign, Noda described himself as a loach fish, i.e. a bottom feeder, and he admitted he was unlikely to win any votes for his party based on his looks. The self-deprecation and low-key approach was successful.
Upon his election as DPJ leader and thus prime minister, Noda made Japan’s fiscal sustainability the focal point of his administration. Within three months of taking office, PM Noda had already successfully implemented temporary tax hikes after an intense parliamentary debate. Amazingly he had also made the first concrete steps toward raising the consumption tax. As regards the temporary taxes, numerous public opinion polls clearly showed support for tax increases with ordinary people believing that the costs of reconstruction should not just be pushed to the next generation.\textsuperscript{13} This was truly a landmark occurrence.

Back in the political world, there was a political debate about what length of time should be considered as the next generation and it was finally agreed that the ‘temporary’ taxes would actually be spread over 25 years.\textsuperscript{14} The significant achievement was that the public and most of the political parties had agreed to increase taxes when Japan would in previous years have simply chosen to issue a large amount of Japanese government bonds (JGBs).

After this underrated success, it took little time for PM Noda to move on to an even bigger target, the holy grail of fiscal consolidation in Japan. PM Noda famously declared that he was ‘staking his political life’ on enacting legislation to increase the consumption-tax hike. He declared that ‘Japan has no future’ if the tax hike was not implemented. This was a jolting and disturbing statement in the year of the Tohoku disaster, but PM Noda said it because he genuinely believed it was true. If Japan could not finally get a grip of its finances, it was facing a bleak economic future. Ordinary citizens may not care about the JGB yield curve but they do ask more rudimentary questions about the consequences of a fiscal crisis in Japan. What would happen to the pension system? What would happen to healthcare? How would Japan care humanely for its ageing population in nursing homes? Where exactly would the fiscal sacrifices have to be made in society? Another quote illustrated the commitment that PM Noda felt to achieving this policy when he said that ‘serving as

\textsuperscript{13} Please see earlier footnote about opinion poll data. To see a broader range of opinion polls, please see http://mansfieldfdn.org/program/research-education-and-communication/asian-opinion-poll-database/listofpolls/.

\textsuperscript{14} Regarding temporary taxes, after intense parliamentary debate, the political parties agreed on implementing a small income tax hike which will raise ¥0.3 trillion a year for a period of 25 years. Diet members also agreed on a corporation tax of 10% hike to raise ¥0.8 trillion a year for three years. The total amount of temporary taxes to be raised over 25 years is ¥9.7 trillion.
prime minister in a situation like this is kind of like answering a divine calling.'

**Understanding the consumption tax dilemma**

During the cherry blossom season each year, senior OECD economists visit Tokyo and announce the findings of their latest Japan research, and each year, like the previous year or indeed the report from ten years earlier, they sternly urge the Japanese government to tackle the country’s rising debt and the daunting increases in the social welfare burden. Colourful graphs helpfully show that the number of retirees is increasing while that of the tax-paying labour force declines. The visiting economists patiently explain, once again, that the obvious way to achieve fiscal sustainability is by raising the consumption tax. In practical terms, it seems so easy; a 1% consumption tax increase would generate approximately ¥2.7 trillion of revenue. To raise the same revenue by other means, income taxes would need to be hiked 19% or corporate taxes need to rise 39%. Despite these repeated words of wisdom from foreign experts, the only noticeable change from year to year in Japan is that the fiscal debt–to–GDP ratio climbs ever higher. Of course, we know that Japan never needed to be lectured on fiscal sustainability; it understood perfectly well what was required. The only problem was that it was politically almost impossible to raise the consumption tax in Japan.

The consumption tax has long been the issue that sparks irrational anger and discontent in the usually placid Japanese general public. It has not been unusual to see housewives burst into tears on a TV show when discussing the injustice and economic difficulty that such a tax hike would have on their lives. It has been viewed as a regressive indirect tax and thus has a disproportionately negative impact on the poorer members of society. In Europe where consumption tax rates are routinely over 20%, it seems quite strange that a value-added tax is such an emotional and contentious issue in Japan, especially when the current

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15. Nikkei.com, ‘Can we end the political buck-passing now?’ 5 June 2012.
16. The tax burden is heavier on low-income earners. Many European countries have reduced sales tax rates for daily necessities. While the standard rate of Germany’s sales tax is 19%, the rate is 7% for foodstuffs, tap water, newspapers, magazines, books and transportation fares among other goods and services indispensable for people’s daily lives. To reduce consumption tax rates is widely seen as a highly effective way to ease the tax’s regressive nature.
consumption tax rate stands at a low 5%. After its introduction as a 3% tax in 1989, and its subsequent increase to 5% in 1997, the consumption tax acquired the rather unfair reputation of being an economy destroyer. It is hardly fair to blame the consumption tax for the burst of the bubble economy in 1990 or for the economic disruption caused by the Asian financial crisis in 1997. Both the timings of the rate hikes were coincidental rather than causal, but you still will hear many Japanese say, ‘look at what happened after the last tax rate hike in 1997.’ However, there has been a big change in public perception about the consumption tax since the triple disaster. It is highly significant that Japanese citizens in response to public opinion polls now consistently answer positively to the question on whether a consumption tax is required for the future of Japan.17

Fiscal sustainability and alternative reality

The perceived urgency of Japan’s fiscal situation is often diluted by the Japanese government debt market being locked in a state of alternative reality that seems to run counter to the basic rules of finance. Despite Japan’s rising debt, there is still very robust demand for JGBs that keeps the government’s interest burden low. In fact, with bond yields falling rather than rising, politicians can argue that there is no fiscal problem in Japan. Judging by the low rates of interest, the market trusts the government and a JGB investment is still considered to be a risk-free asset on a balance sheet. In this alternative reality, a Japan rating downgrade from one of the foreign rating agencies can be greeted with a disinterested shrug of the shoulders. It was notable that even when R&I, a Japanese rating agency, chose to downgrade Japan from its AAA rating in late 2011, this event passed largely unnoticed outside of the foreign media. How do we explain this unusual situation and has the Tohoku disaster made any impact on the investor perceptions within the JGB market?

In the 18 months after the disaster, interest rates on JGBs have fallen to record lows. Far from the large reconstruction costs aggravating fiscal sustainability worries, the opposite has been true with even foreign in-

17. A snapshot of this view is seen in the following case: ‘The government is also planning to raise consumption tax to 10% by the mid 2010s to fund the welfare system. Do you agree with this move?’ Agree 50% – Disagree 42%. Asahi Shimbun opinion poll (15/11/2011). As mentioned earlier, questions that are phrased as being for the long-term benefit of Japan will enjoy higher approval rating than questions such as ‘Do you want a tax hike in 2014?’.
HAS 11 MARCH 2011 USHERED IN A NEW SENSE OF FISCAL RESPONSIBILITY

Investors viewing JGBs as a safe haven amid the European sovereign debt crisis. Foreign investors represent 8% of the JGB market in 2012, the highest level since such records began in 1979. Unfortunately these low yields are not due to investor confidence inspired by temporary taxes or a perception of a new era of government fiscal responsibility. The constant inflow of funds to the bond market in search of ‘safe assets’ has created a ‘JGB bubble’ or an ‘inefficient equilibrium’ where low yields do not reflect the growing risk. The paradox of Japan’s fiscal situation becoming more risky while government borrowing costs fall has been succinctly described by the IMF as the ‘Why didn’t the dog bark?’ effect.18

There are two theories about this. The first says that financial markets are rational and that the decline in the short-term interest rate, real GDP growth rate and inflation rate should lead to lower nominal-interest rates. If these factors are taken into account, it can be argued that the current low-interest rates are in fact an accurate reflection and that despite the low interest rate, they include a risk premium. The second theory is that financial markets are irrational in the long-term but rational in the short-term. The JGB market is in a ‘bubble’ situation which is currently quite stable. The prime factor is that domestic investors hold 92% of total government bonds with financial institutions, the largest holders with a share of 76%. JGBs are essentially ‘locked-in’ in to the portfolios of these institutions. Since the early 2000s, Japanese banks have been increasing investments in JGBs primarily due to the lack of other profit-making alternatives. They held roughly 39% of outstanding JGBs as of end-2011 according to Bank of Japan (BOJ) data. This is equivalent to about 25% of their total assets. In short, the domestic absorption capacity for Japanese government bonds is extremely high.

The JGB market is essentially oligopolistic; Japan Post Bank alone holds over 17% of the whole market as its banking operation collects 23% of all saving deposits in Japan. The government can effectively use the massive pool of Japan Post deposits to indirectly fund itself and thus partially escape the economic realities of rising debt. The BOJ holds 10% of the JGB market and has been significantly increasing its debt holding to ease monetary conditions in the economy. As discussed above, a small number of large banks hold 39% and life insurance and

pension funds have 25%. The oligopolistic structure means that there is little market reaction to bad economic news. Most of these investors are in for the long haul so rather than being bond vigilantes, they resemble silent shareholders on the Tokyo stock exchange.\textsuperscript{19}

Reports from bond market analysts suggest that this is not a happy equilibrium, as investors are captive rather than content. Each major market player is closely watching the reaction of the other. In 2012, it was quietly announced that the Bank of Tokyo-Mitsubishi UFJ formed a crisis management plan for a possible plunge in JGB prices. In this situation, a disorderly exit is likely as everybody will run for the door at the same time. There will be nobody on the other side of the market to buy such a massive disinvestment. The government entities of the BOJ and Japan Post could buy more bonds but not on the massive scale required. In short, Japan would face a fiscal crisis, which would become a banking crisis that would threaten the savings of ordinary people. These are the concerns that forced PM Noda to look beyond short-term JGB market complacency and which prompted him to believe that ‘Japan will have no future’ without a consumption-tax hike.

Japan’s debt sustainability has become a matter of banking system sustainability. Bank of Japan Governor Masaaki Shirakawa stated several times in 2012 that a sudden rise in government bond yields would expose Japan’s banks to trillions of yen in losses. The governor outlined how a rise in JGB yields by two percentage points across maturities would result in a loss of ¥7.3 trillion on bonds held by Japan’s 12 major banks. This issue was also a factor when Fitch Ratings, in mid-2012, cut the long-term credit ratings of four major Japanese banking groups to A-minus from A, citing what it described as ‘the government’s weakened financial ability to support the banking system’ in a crisis. In Europe, the link between bank solvency and government debt was a key factor in the sovereign debt crisis. In Japan, the mutual dependence of the government on banks’ JGB purchases and subsequently the banking sector’s vulnerability to government sustainability is growing increasingly dangerous.

\textsuperscript{19} The silent shareholders are the institutional investors or the cross-shareholding between companies who due to their passive positions mean that most company AGMs are over in 40 minutes with minimum complaint.
HAS 11 MARCH 2011 USHERED IN A NEW SENSE OF FISCAL RESPONSIBILITY

Conclusions

This chapter has attempted to show that despite the alternative reality existing on the JGB market, the Japanese government has bravely made an important step towards fiscal consolidation by pushing to raise the consumption tax to 10% by 2015. My central premise has been that this tax hike was only made possible due to a sense of public responsibility awakened by the 11 March tragedy. It simply would not have been possible without the understanding of the public. To pass the tax legislation in both houses of parliament, the DPJ forged a tripartite agreement with the two main opposition parties, the Liberal Democratic Party and New Kōmeitō. This is another example of the consumption tax creating a rare event in Japan, a temporary halt to partisan politics. A Yomiuri Shimbun opinion poll in mid-2012 poignantly found that 61% of respondents wanted the ruling DPJ and the two main opposition parties to continue their cooperation in addressing policy issues other than tax and social-security reforms, compared with 29% thinking otherwise.20 Does this show the seriousness of the Japanese public who are saying ‘no’ to political games? This is a poignant wish because it appears highly unlikely that this heralds a new era of political co-operation for the common good. Some analysts may argue that the opposition used PM Noda’s commitment to raise the consumption tax as political leverage to extract an early election.

The increase in the consumption tax is not the happy ending of the story, as the negative pressure on Japan’s credit rating will remain, according to Fitch Ratings.21 They state that ‘Japan’s fiscal consolidation plan looks leisurely relative even to other fiscally-challenged high-income countries’. The cabinet office, in 2012 projections, ominously warns that the consumption tax rate must be raised to 17% to reach the target of a primary balance by FY 2020. Some economists have even suggested that Japan can only be fiscally secure if it raises the consumption tax to 25% as quickly as possible. Unfortunately, the public goodwill derived from the Tohoku tragedy will likely be exhausted after the first 5% hike. There are other uncertainties such as whether future prime ministers will attach the same priority as PM Noda to fiscal matters. The concern

21. Fitch downgraded Japanese debt in May 2012. It was not considered to be major news in the Japan media.
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is that politics and the public will revert to the basic hostility towards taxes after 2015. Hopefully, it will not take another large-scale shock before Japan re-examines its fiscal situation.
CHAPTER FIVE

Japan’s energy crossroads: nuclear, renewables and the quest for a new energy mix

Richard Oppenheim

Direct impacts on the energy sector

The Fukushima accident created such catastrophic damage to the reactors at the Fukushima-Daiichi nuclear power station that none of the plants’ six reactors will ever be operated again. But the Great East Japan Earthquake and ensuing tsunami also damaged other nuclear reactors along Japan’s Pacific coastline. Eleven operating reactors were automatically halted by their safety systems when the earthquake struck: three at Fukushima-Daiichi, four at Fukushima-Daini, three at Onagawa, and one at Tokai. In addition to the six reactors at Fukushima-Daiichi, it seems very unlikely that the four at Fukushima-Daini will be restarted.

Because of these automatic halts, 43 of Japan’s 54 reactors were thus theoretically in an operational state immediately after the earthquake. But Japan’s nuclear safety regulations require that reactors go offline every 13 months for regular inspection, and by mid-May 2011 only 17 of Japan’s reactors were actually operating. In addition to the 11 stopped by the earthquake, 24 were off line due to regular inspections and two were off line because of an unplanned inspection or for maintenance purposes. As regular inspection intervals demanded, in the course of the 14 months following the triple disaster, all 17 of the remaining operating reactors were taken off line. The unusual feature was that none was restarted during that time. Japan’s nuclear safety regulations require that both national and local approval is granted before reactors can be restarted. Local approval comes through agreement between the local mayor and the utility company operating the reactor. Since 11 March,
these guidelines have been revised by the government to include the need to pass two sets of stress tests and receive national approval by a quartet of four senior politicians (the prime minister, minister of the environment, minister of economy, trade and industry, and the chief cabinet secretary) before being referred for local approval by both the local mayor and the prefectural governor.¹

Despite the stricter regulations demanding stress tests, and the speedy, and internationally highly-rated improvements put in place by utility companies, it has been very difficult to get the local part of the approval for restarts. This has been largely due to public concern around nuclear safety – particularly the possibility of another large earthquake occurring near a nuclear site. The location of a number of Japan’s nuclear reactors on or near major seismic fault lines has been a significant factor. Concern has been exacerbated by predictions of another major quake (M7.0 or more) happening in the Kanto region surrounding Tokyo within the next 30 years.

A further issue which has made restarts more difficult to scientifically justify was Prime Minister Naoto Kan’s decision to close the reactor at Hamaoka in May 2011 in response to public and political pressure after it was predicted that a major quake was due on the fault line which runs almost directly underneath the reactor. The closure occurred with no safety review or specific inspection, which some have suggested undermined the process for testing and proving the safety of nuclear facilities. Since then, Japanese leaders have taken a more measured and methodical approach to nuclear safety regulation.

Commentators have laid much of the blame for the Fukushima accident at the door of the absence of an independent safety regulator. Before 11 March 2011, Japan’s Nuclear and Industrial Safety Agency (NISA) was part of the Ministry of Economy, Trade and Industry (METI), which was itself responsible for promoting nuclear energy. This arrangement is suggested to have fostered an overly cosy relationship between promoter and regulator, allowing ‘voluntary’ safety improvements recommended as part of emergency preparations to go

¹. Following the inauguration of the first cabinet under Prime Minister Yoshihiko Noda in September 2011 the environment minister served as the minister for the restoration from and prevention of nuclear accident, and as minister of state for nuclear power policy and administration.
largely ignored. Until March 2011, NISA had around 100 employees and an annual budget set by METI.

One direct impact of the events of 11 March has been a reconsideration of electricity market reform. It is no exaggeration to say that this could prove to be one of the most significant consequences of the accident not just for energy policy but for society as a whole. Japan
considered ‘unbundling’ of electricity generation from distribution in the 1990s but chose partial reform which kept the ten regional power companies firmly in the driving seat – with a de facto monopoly of both generation and supply. Other companies were allowed to enter the market but in reality, by 2011, companies outside the big ten were supplying just 3.5% of Japan’s electricity.

Japan has a highly efficient and well-maintained energy grid. But it is also heavily vertically integrated and considered by many observers to be too rigid to deal with large volumes of renewable energy. As was shown during the crisis, it is ill-equipped to allow electricity to flow between regions. The starkest illustration of this is the fact that western Japan runs on 60Hz, with eastern Japan on 50Hz and only 1GW of transformation capacity allowing the two halves to supply each other. This inflexibility was cruelly exposed when the 50/60Hz problem effectively prevented western Japan supplying Tokyo and the Tohoku regions after the earthquake. Until legislation was hurriedly introduced soon after March 2011, the system even prevented Hokkaido from supplying neighbouring Tohoku, which had been most heavily hit.

Probably one of the most obvious and significant policy impacts of 11 March was the speedy introduction of legislation for feed-in tariffs (FITs). The sudden non-use of nuclear resources in Japan left a significant energy shortfall which was immediately made up mostly by LNG and oil – largely through restarting mothballed thermal generation plants and importing back-up emergency generation capacity. But it became very quickly apparent that the long-term alternative to any reduction in plans for nuclear was more renewable energy. In order to encourage renewables after 11 March, PM Kan championed the case for FITs. Under pressure to resign in part for his perceived failure to respond adequately to the 11 March disaster, Kan made Diet passage of legislation to provide for FITs one of the conditions for his resignation. The legislation was passed in August 2011. The FITs cover a range of technologies and are reviewed later in this chapter.

The key renewable technologies and some of the challenges involved in deploying them

For solar, there is a greater focus than before on developing micro-generation and mega solar. Japan has frequent sunshine and Japanese companies have a head start on the technology. The disadvantage is the
space that solar panels take up in a relatively crowded country. But solar will continue to be important for the future energy mix.

For wind, a re-examination of potential for both onshore and offshore generation is underway. Onshore wind is challenging in such a densely populated country, but there are some areas (particularly in Hokkaido and Northern Kyushu) where it looks feasible. Offshore wind has until now been blocked by two factors. The first is opposition by the fishing lobby who have powerful legal rights to fish in Japan’s seas and have demanded compensation from wind farm developers at levels that prevent offshore wind being commercially viable. The second is the deep ocean shelf close to Japan’s shores, which prevents normal deployment of offshore turbines rooted on the seabed. If the fishing issue can be dealt with, floating platforms might provide a solution for the seabed depth problem allowing Japan to exploit this valuable and considerable resource.

For geothermal, deregulation is beginning to allow Japan’s huge potential to be unlocked. It is favoured as a reliable base-load energy source compared with solar and wind, and long power station lifetimes allow good returns on investment. Japan’s natural geothermal resources are the third largest in the world, but since 1974 regulations banning the development of geothermal plants within national parks have blocked exploitation of 79% of Japan’s huge resources – an estimated 23 GW. Currently, there are 18 geothermal power plants in operation with a total capacity of 540 MW, most located in the country’s north (Hokkaido and Tohoku) with some in Kyushu. The two greatest challenges for geothermal are bringing down costs and gaining local community support – particularly difficult as geothermal plants do not generate large numbers of jobs. There has been stiff opposition to projects from Japanese hot-spring owners concerned about the impact on their businesses.

For marine energy, sites for testing devices are rapidly being developed for both wave and tidal energy. This work is largely being led by Japan’s New Energy and Industrial Technology Development Organisation (NEDO), which comes under METI and which signed in 2012 an information sharing agreement with the Scotland-based European Marine Energy Centre (EMEC). NEDO hopes to develop a Japan Marine Energy Centre, modelled on EMEC, which provides testing sites and
technical expertise to support new marine technologies develop from the laboratory to commercial feasibility. Japan has potential resources of both wave and tidal energy.

*Hydroelectric power* is Japan’s largest existing renewable energy source already providing over 9% of the total energy mix. Many of Japan’s rivers have been dammed to create hydro plants and Japan’s naturally mountainous terrain and abundance of waterfalls make it an ideal technology. Japan has developed around two-thirds of its technically exploitable hydropower resource. Since 11 March 2011, METI has been looking into potential development of more of what remains.

*More gas, extreme energy efficiency and the energy review*

The immediate effect of the accident was a steep rise in the quantity of LNG imports – so that by September 2011 there had been a 15% year-on-year rise. By the end of 2011, Japan had imported around 83 million tonnes as compared with around 71 million tonnes in 2010. This was accompanied by an expansion in the list of countries from which Japan imported the fuel. The cost was considerable. In fact, the cost of LNG imports accounted for Japan’s Y3 trillion trade deficit in FY 2011. This cost was increased by Japan’s reliance on long-term supply contracts whose prices are considerably higher than international market rates, particularly in the US. At the end of 2011, Japanese LNG import prices were $14 per million British Thermal Units (MMBTU) compared with $3 MMBTU in the US. Oil imports for power generation also increased, doubling in 2011 compared with 2010, with month-on-month imports more than tripling after the earthquake, as emergency back-up generation brought in from abroad and the restart of previously mothballed reactors led to increased demand. The non-use of nuclear power stations during the period after the earthquake led to Japan suddenly not having enough power during the peak demand season. Summer 2011 largely avoided the widespread rolling blackouts that occurred in a number of areas of Tokyo in the months immediately following the disaster. The government-enforced 15% reductions on power consumption by industry and households were key to achieving this. To deliver the compulsory consumption cuts and help with management of peak demand, many companies adjusted their working week and arranged for shift work to focus energy consumption at times of low demand. This management of peak demand, together with widespread public understanding and effort (many office buildings
Japan’s energy crossroads

The events of 11 March 2011 have forced Japanese policymakers to rethink the best pathway to Japan’s energy future. The most fundamental expression of this was PM Kan’s call for a zero-based review of energy policy in May 2011 in response to public concern around nuclear power, until then a key pillar of Japan’s basic energy plan. The review was based on ‘3Es and one S’ – ‘environment, energy security, economics and safety.’ Not wanting to prejudge the debate, the government avoided prioritising any of these above the other. But public and political focus saw safety and energy security rise above environment or economics. A ministerial-level Energy and Environment Council (EEC) was set up in June 2011 to consider future energy policy on the basis of recommendations from three subsidiary bodies. The EEC also set up a cost verification committee to re-evaluate the costs of a range of energy sources based on revised costing methodology for nuclear. With the future of nuclear energy a totemic political issue, membership of all of the committees was deliberately made up of both proponents and opponents of nuclear energy and spread amongst experts, academics and think-tankers. Some commentators have suggested that the media’s tendency to label members as ‘pro’- or ‘anti’-nuclear and the lack of a

Figure 5.2: Tokyo blackout in March 2011, viewed from the Tokyo Tower
After the Great East Japan Earthquake

clear strategic government steer on the relative priorities of ‘3Es and one S’ fostered emotional and ideological discussions at the cost of more logical and strategically grounded debate.

Energy policy before 11 March

Japan is rich in natural assets – with an abundance of fertile land, forests, fresh water and fish. But she is poor in energy resources, with hydroelectric power the only significant indigenous energy source contributing to the energy mix. Japan’s search for energy security has been and remains one of its greatest strategic challenges. For any country, energy is key to both prosperity and security. For Japan this increasingly became the case as its economy developed in the 1950s–70s into one heavily reliant on energy-hungry industrial exports. Access to fossil fuel imports was a major strategic problem for Japan’s military during World War II. As the post-war economy developed, Japan began to look for alternative sources to oil, gas and coal, building its first nuclear power station with British technology and support in Tokaimura in the 1960s.

The oil shocks of the 1970s did massive damage to Japan’s economy and highlighted the weakness of relying on fossil fuels. Japanese policymakers concluded that achieving energy security would require greater reliance on nuclear power – the only technology at the time which could deliver a consistent base load without relying on fossil fuels. This led to an expansion of Japanese nuclear energy capacity and by the 1990s nuclear made up well over 20% of Japan’s power generation. As Japan’s economic bubble collapsed at the start of the 1990s leading to a long period of economic stagnation, affordable and secure supplies of energy became increasingly important to achieving recovery. Fossil fuel prices continued to fluctuate wildly and nuclear became an accepted central pillar of Japan’s energy policy.

By 2010, nuclear provided 26% of Japan’s electricity. Japan’s basic energy plan envisaged 14 new nuclear power stations and 50% of Japan’s generated electricity coming from nuclear by 2030. Underpinning this strategy was Japan’s nuclear research and development activity, which was designed to allow Japan to close the nuclear-fuel cycle through a reprocessing plant and a fast breeder reactor in Aomori Prefecture. This focus on nuclear allowed Japanese electricity companies and the government to overlook opportunities to develop renewables which
looked more expensive and more difficult for some of the reasons listed above. In fact, by 2010, less than 1% of Japan's energy generation was from non-hydro renewable sources. For a country with so much relevant technology, the world's third largest geothermal resources, and ample sun, wind and marine resources, this may sound somewhat surprising.

Japan's first basic energy plan was published in 2003 and revised in 2007. In 2010, Japan's Ministry of Trade, Economy and Industry (METI) produced a second revision. METI's website describes the basis of this 2010 energy plan thus: 'In addition to the three fundamental principles of national energy policy (energy security, energy conservation, and efficient supply), the Strategic Energy Plan of Japan focuses on new perspectives: economic growth based on energy and structural reform of the energy industry.' The plan included a list of targets for 2030 including increasing Japan's energy independence from 38 to 70%, doubling 'zero-emission power sources' to around 70%, halving residential CO₂ emissions, maintaining Japan's world-leading industrial-energy efficiency and maintaining or obtaining major global shares in markets for energy-related products and systems. It aimed to do this through a number of measures including securing resources and enhancing supply stability, establishing independent and environmentally-friendly supply structures and a low-carbon energy demand structure, building next generation energy systems and diffusing innovative technologies, pursuit of structural reform in the energy industry, and enhancing international co-operation. The fundamental pillar for achieving much of this was the expansion of reliance on nuclear power. The contents and intentions contained in that strategy provide the context for the changes precipitated by the events of 11 March 2011.

Prior to 11 March, Japan was operating 28 of its 54 reactors. 24 were stopped for routine inspections and two for unplanned checks. Following a magnitude 6.8 earthquake on 16 July 2007, the operation of the TEPCO nuclear power plant at Kashiwazaki-Kariwa was halted. The facility is the largest nuclear power plant in the world, with a total of around 8GW of installed capacity produced by seven reactors. The earthquake exceeded the seismic design limits of the plant, but an International Atomic Energy Agency inspection team visiting to identify

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lessons learned for the international nuclear safety regime concluded that the installation had behaved in a safe manner both during and after the earthquake.³

Before 11 March (in addition to the fast breeder project at Monju) Japan was constructing two reactors – in Shimane and Oma. There were plans for ten more to be built by 2018 and proposals for a further five to be constructed after that. With some exceptions, there was generally a relatively high level of public confidence in the safety of nuclear and power plants that were restarted following regular maintenance outages. Some would say that this confidence was based on a kind of ‘false social contract’ between the government and the public. This is alluded to in the Kurokawa report which outlines the finding of an independent expert committee set up to investigate the causes of the accident.⁴

The nuclear safety regulator in Japan before March 2011 was the aforementioned NISA, established in 2001 as part of a reorganization of central government ministries through the merger of nuclear energy regulatory bodies that existed separately under the former Science and Technology Agency and the old Ministry of International Trade and Industry. NISA was part of METI, which was also responsible for promoting nuclear energy. NISA was responsible for safety regulations for nuclear power stations, and the safety of electrical power, utility gas and heat supply. The Nuclear Safety Commission (NSC), which comes under the cabinet office, had the role of overseeing NISA. The NSC had the authority to issue recommendations to the prime minister on nuclear safety, although it had only done this once since its establishment in 1978. The occasion occurred in 2002, after reports surfaced that electric power companies were covering up problems at their nuclear plants. The NSC was also responsible for coming up with design guidelines for nuclear power plants including those at Fukushima (later identified as one of the causes of the accident) for how to deal with a prolonged period of lost power. In 2007, the IAEA pointed out that greater independence was needed in Japan’s nuclear regulatory setup.⁵

Japan’s Energy Crossroads

Japan’s electricity market has long been dominated by ten regional utilities, which exercise virtual monopolies over generation, transmission and retail distribution. The power generation market was partially liberalized in the late 1990s after a long period of consultation, but more deep-rooted reform was strongly resisted by the powerful utilities. Since then, there have been few new entrants to the Japanese market because of the utilities’ strict control of power-transmission networks.

Before March 2011, renewables made up 10% of Japan’s energy mix. Most of this was hydro (9% of the total), with the majority of the remainder being wind and biomass and even tinier fractions of solar and geothermal. There was no feed-in tariff, although this was suggested as one of the measures that would help to achieve Japan’s target of getting 20% of its energy from renewables by 2030. There were a number of reasons for the lack of development of non-hydro electric renewables, many of which are referred to above. The single biggest reason was the extra cost when compared with nuclear power, which provided a reliable base load for Japan’s vital manufacturing industry. Another reason was the intermittency of solar and wind power, neither of which is easily compatible with Japan’s heavy, non-flexible and vertically integrated monopoly-supplied electricity grid.

Prior to March 2011, 26% of Japan’s electricity was generated from nuclear, 10% from renewables, 29% from gas, 10% from oil and 24% from coal. There were plans for this to change to roughly 50% from nuclear, 20% from renewables, and 10% each from oil, gas and coal in METI’s energy strategy for 2030 released in 2010. Japan has been steadily reducing imports of oil from Iran since 2009 while expanding as much as possible the spread of countries from which she sources both oil and gas. Instability in key oil-producing countries has been of particular concern, although the discovery of shale gas in a number of areas of the world has offered at least the prospect of some respite in global markets.

Japan has long been the country of shō-ene – or energy saving. The concept of frugality is deeply ingrained in Japanese culture with the concept of mottainai, which is about avoiding waste. Combined with Japanese technological prowess, this has allowed Japan to achieve world-leading levels of industrial energy efficiency and a relatively

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After the Great East Japan Earthquake

high GDP per energy unit used ($8.9 per kg oil equivalent) in 2010. Industrial efficiency has not, however, led to household efficiency despite the plethora of world-leading Japanese companies and technologies involved in efficient household goods. This may be partly down to issues with buildings insulation. Japan’s flagship energy efficiency programme has been the ‘Top Runner’ regulatory scheme introduced in 1998. Top Runner is designed to encourage continuous improvement in the operational energy efficiency of household and offices appliances, and vehicles. It targets the supply side, i.e. manufacturers and importers, rather than retailers and consumers. By rewarding the use of best available technology across the board, the scheme has helped accelerate the diffusion of new technologies across the market.

Policy changes since 11 March

Energy Policy – the mix and what it looks like

Significantly, a proposal to ensure that nuclear power stations are assumed to have a 40-year life (except in very exceptional circumstances where extensions of up to 20 years can be considered) was submitted in January 2012 by environment minister Goshi Hosono. This proposal is something for the new Nuclear Regulation Authority (NRA) to consider, but it has been endorsed by the September 2012 Energy Strategy (see below). As part of the energy review carried out after the 11 March disaster, the fundamental issues subcommittee under METI’s Advisory Committee for Natural Resources and Energy (ACNRE) examined energy policy options, and the Central Environment Council (CEC) under the Ministry of Environment looked at options for CO2-reduction-target scenarios. The existing Atomic Energy Commission was tasked with examining options for fuel cycle policy entailing all aspects of spent fuel management.

A several-month period of discussions by committees set up under the Energy and Environment Council (EEC) allowed ACNRE to submit four options for Japan’s future energy mix to the EEC at the end of May 2012. The options included scenarios for 0, 15, and 20–25% of nuclear power as a proportion of the energy mix in 2030. The fourth option was that the market should be left to decide. A fourth subcommittee was also

7. See footnote 1 for more information about the environment minister’s nuclear-related roles.
created part way through the process to look at the rationale and options for electricity market reform. During June, the EEC picked three options from the original four for public consultation and discussion. All of them would deliver 1 trillion KWh of power compared with the 2010 energy mix, which provided 1.1 trillion KWh. Energy efficiency savings, improved peak demand management, and the ageing population were expected to reduce demand.

The options were:

- 0% nuclear (with 35% renewables, 21% coal, 38% LNG and 6% oil)
- 15% nuclear (with 30% renewables, 20% coal, 29% LNG, and 5% oil)
- 20–25% nuclear (with 25–30% renewables, 18% coal, 27% LNG, and 5% oil)

The 0% option looked unrealistic from an energy security perspective. It also looked expensive. The cost of disposing of nuclear infrastructure already built and paid for and the need to import considerable quantities of extra LNG to make up the shortfall would be excessive. The options assume 1% annual economic growth. The 0% option leaves no margin for error, meaning that if growth were to exceed expectations, the maximisation of available energy sources could be allowed to cap growth potential. The 15% option had the convenient practicality of compatibility with the use of existing plants assuming a 40-year life duration. Japan would automatically reach the 15% level in 2030 by not building new power stations. The 20–25% option would have required Japan to continue with the construction of pre-Fukushima planned nuclear power stations or to extend the life of some of the existing plants beyond 40 years. Construction and/or life extensions of nuclear plants beyond 40 years were not compatible with the Japanese domestic public and political mood in summer 2012. Going into the debate, the 15% looked the obvious middle-ground option. After a series of public hearings, opinion polls and political consultations carried out during the summer of 2012 in which members of the public were consulted on their views, the EEC decided on a new ‘Innovative Strategy for Energy and the Environment’ on 14 September 2012. A cabinet decision undertook to ‘take account’ of the strategy, making clear that the strategy

would be constantly reviewed in the light of discussions with relevant local governments, the international community and the public.

The new strategy aimed for the ‘realization of a society not dependent on nuclear power’ and undertook to ‘mobilise all possible policy resources to such a level as to even enable zero operation of nuclear power plants in the 2030s’. Three guiding principles were outlined:

- Strict application of the 40-year life rule (but including the allowance for extensions up to 20 years in exceptional circumstances);
- Restart of nuclear reactors once the NRA gives safety assurances;
- Not to plan new and additional construction of nuclear power plant.

In order to make up the energy gap, the strategy called for the composition of a ‘Framework for green development policy’ by the end of 2012 to achieve energy savings of 10% and renewables contributing 30% of energy by 2030. It advocated bold electricity market reform while maintaining the nuclear fuel cycle policy of reprocessing all spent fuel.

The strategy did not indicate a fixed percentage of nuclear in Japan’s energy mix in 2030, or decide to phase out nuclear power. It essentially called for Japan’s energy policy to be under permanent review. Some would say it was deliberately ambiguous. But it did set Japan in two new directions. One was to reduce drastically the proportion of nuclear power in Japan’s energy mix planned for 2030. If the principles are adhered to, it can be inferred that the proportion will likely be in the region of 15–20%. With sufficient public support, proportions higher than 15–20% might be possible but disruption to an ambitious new build programme makes figures higher than 30% by 2030 difficult to envisage. The second new direction was the serious deployment of renewables. The strategy set a target of 30% renewables by 2030. This was a major shift in energy policy with implications for the grid, the Japanese electricity market and the global renewables landscape.

Nuclear restarts and nuclear safety
With all Japan’s nuclear reactors off line by May 2012, concerted political efforts were made to underline the importance of nuclear energy.

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9. Ibid., p.2.
10. Ibid., p.4.
11. Ibid., p.5.
Japan’s energy crossroads

The impending summer peak and the need for power in west Japan’s heavily industrialised Kansai region created considerable further pressure for restarts. The focus was on two Kansai Electric Power Company reactors at Oi in Fukui Prefecture which had been able to pass the two-stage stress test process put in place as a prerequisite for restarts after 11 March. After several weeks of cajoling by government and businesses, the necessary local and national approval was obtained, allowing both reactors to restart operations in July 2012. This helped with projected energy shortages and allowed a downward revision in energy consumption reduction requirements from 15% to 10% for the Kansai region.

The question of future restarts of other reactors has been an issue with winter and summer peak electricity demand continuing to play a role in terms of timing. Another important issue affecting possible restarts is whether certain reactors sit along active earthquake fault lines. It has also been suggested that some reactors may have to be decommissioned ahead of schedule if they cannot be restarted, but no process for deciding this has been established.

Since the 11 March accident, there has been considerable political and public focus on nuclear safety and regulation issues. In the wake of the Fukushima accident, an IAEA expert fact-finding mission reported a list of lessons learned and conclusions including that ‘there were insufficient defence-in-depth provisions for tsunami hazards’ and that ‘nuclear regulatory systems should ensure that regulatory independence and clarity of roles are preserved in all circumstances in line with IAEA Safety Standards’.12

In June 2012, legislation was passed that paved the way for a new Nuclear Regulation Authority (NRA) headed by a commission comprising four commissioners and a chairperson whose appointments must be approved by the Diet. The NRA was formally established on 19 September with Shinichi Tanaka appointed as the commission’s chairperson. The NRA is an independent commission body affiliated to the Ministry of Environment, and is supported by a secretariat.13

comparison with NISA, the new regulatory body – and its secretariat – is well resourced. The ministry was allocated 500 new staff and its budget increased five-fold to cope with the extra responsibilities of dealing with nuclear safety, decontamination and clean-up. The NRA has significant decision-making powers in regards to nuclear safety both in an emergency and during normal times. This includes the authority to demand reporting from the utilities or to enter nuclear sites without requiring permission. It also includes the power to stop the operation of reactors if the NRA’s technical judgement is that they are unsafe and to approve (or not) extensions of reactor operation beyond 40 years. The secretariat operates within the administrative structure of the Ministry of Environment but the NRA’s budget and staffing are independent of the ministry.

Electricity Market – plans for unbundling, market regulation, and prospects for a new ‘grid philosophy’

Many would argue that the credibility of Tokyo Electric Power Co. (TEPCO), and to some extent the other major power companies, has been badly damaged by the events of 11 March. Nonetheless, Japanese politicians and the public have been forced to focus on the need to seriously pursue the exploitation of their naturally available renewable energy resources. This will require a grid that can cope with the changes, and rules and regulations that will allow the flexibility for one region to supply electricity to another. Japan’s power grid is well set up for large quantities of base load power – nuclear, hydro, and thermal. Since the triple disaster, rules have been relaxed to allow non-major utilities to supply to the grid and policy-makers are seriously considering what kind of electricity market might deliver the grid that Japan’s new energy mix will require.

There is general consensus that the changes will need to include unbundling generation from distribution. But the debate on how this might be done, and why, is only beginning. Japanese policy-makers have been actively gleaning lessons learned from a number of countries with liberalised electricity markets. Achieving robust, independent regulation of any future liberalised Japanese electricity market will be key to its success. Changing the grid from being ‘vertically integrated’ to ‘smart and horizontally integrated’ will require considerable political will and investment.
If it can be achieved, it will unlock the possibility of maximising Japan's renewables potential, to the benefit of national energy security and economic growth. As a number of countries around the world are discovering (Germany, South Korea, China and the UK among them), construction of low-carbon infrastructure and aggressive low-carbon transition contributes to economic growth, creates jobs and attracts investment. The growth strategy released in July 2012 (known as ‘The strategy for re-birth of Japan’) indicated that green growth is seen as a key plank of the country’s economic future. As in all countries, government policies to support green growth will be vital to success.

Renewables – the world’s most generous FITs, deregulation and policies so far

Japan’s new energy plan requires increasing renewables from 10% in 2012 to 30% of the energy mix by 2030. Considering that more than nine-tenths of Japan’s renewable energy power generation currently comes from hydro, this will require huge, rapid expansion in other renewable technologies. In order to address this challenge, Japan announced the world’s most generous FIT rates in June and they took effect on 1 July 2012. FIT technologies and rates are as below (see Table 5.1).

Significantly, the legislation obliges existing power companies to purchase all available energy from renewable sources. These generous rates allow for a 6% rate of return on investment and are expected to encourage new investment in renewables and increase renewable take-up by 2.5 million kW during FY 2012. The system has been designed

### Table 5.1: FIT technologies and rates

<table>
<thead>
<tr>
<th>Source</th>
<th>Capacity</th>
<th>Tariff (¥/kWh)</th>
<th>Period (years)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Solar</td>
<td>Over 10KW</td>
<td>42.00</td>
<td>20</td>
</tr>
<tr>
<td></td>
<td>Under 10KW</td>
<td>42.00</td>
<td>10</td>
</tr>
<tr>
<td>Wind</td>
<td>Over 20KW</td>
<td>23.10</td>
<td>20</td>
</tr>
<tr>
<td></td>
<td>Under 20KW</td>
<td>57.75</td>
<td>20</td>
</tr>
<tr>
<td>Geothermal</td>
<td>Over 15MW</td>
<td>27.30</td>
<td>15</td>
</tr>
<tr>
<td></td>
<td>Under 15MW</td>
<td>42.00</td>
<td>15</td>
</tr>
<tr>
<td>Hydro</td>
<td>Under 200KW</td>
<td>35.70</td>
<td>20</td>
</tr>
<tr>
<td></td>
<td>200KW–1MW</td>
<td>30.45</td>
<td>20</td>
</tr>
<tr>
<td></td>
<td>1–30MW</td>
<td>25.20</td>
<td>20</td>
</tr>
<tr>
<td>Biomass</td>
<td>13.65–40.95</td>
<td>20</td>
<td></td>
</tr>
</tbody>
</table>
to encourage early entrants with the purchase prices above, guaranteed for the periods noted for deployment within three years. METI plans to review the rates annually from 2015 onwards. In order to finance the FITs, a surcharge will be applied to all consumers evenly and added to electricity bills. The 2012 surcharge was set at ¥0.22/kWh or ¥87 per month for a household with a monthly electricity consumption of 300kWh.

Alongside these generous FITs, a number of significant measures to deregulate and ease deployment have been taken. The market has already begun to respond and there are major plans across technologies for new plants. So far, solar has seen the greatest quantity of new build since the introduction of FITs. By the end of July 2012 plans for more than 300MW of new build had been announced. Work on wind deployment was also progressing with demonstration projects for floating offshore wind farms launching in Kyushu and Fukushima.

In order to accelerate renewables deployment, the government has relaxed regulations enabling the use of abandoned farmland and is reviewing guidelines to build wind power inside national parks. In March 2012, the Ministry of Environment relaxed standards for constructing geothermal power inside national parks that did not require special protection as long as work demonstrates environmental integrity and maintains the landscape. By July 2012, this deregulation had already led to more than 30 prefectures showing interest in geothermal development and 11 projects are planned from 2012. The government has selected five specific sites within national forests with particular consideration given to minimising the impact on natural landscapes – making buildings small and choosing colours that blend in to their background. METI hopes to complete at least three new plants by 2030.

*The switch from coal to gas*

One of the ways Japan is likely to try to reduce CO₂ emissions will be by switching from coal to gas. If supplies of unconventional gas can be brought to international markets, gas prices are likely to become increasingly competitive with coal. In order to meet the short-term gap in capacity while renewables are brought online, Japanese utilities are building a number of gas-and coal-fired power stations. These will be constructed using globally leading high-efficiency technologies, but do carry the risk of locking in emissions. One way to avoid this will be
to ensure that these new plants are built ‘carbon capture and storage (CCS) ready’. CCS is the technology that allows fossil fuels to be used to provide energy while capturing most of the CO₂ emissions and storing them in already exploited oil and gas fields. Being ‘CCS ready’ requires empty land to be available next to the plant so that CCS facilities can be built once the technology is available.

Energy saving – peak demand control and social measures

The peak demand management measures of summer 2011 were taken forward into summer 2012. The government introduced a peak-electricity trading scheme that adjusts prices according to the timing of demand. Japanese utilities are legally required to ensure that there are no interruptions in power supply. This has led to a system where supply is fixed at a level equal to the highest peak during the year. The Japanese demand peak lasts for four hours during an afternoon in the third week of August when the high school baseball finals are held and people stay inside to watch TV with the air conditioning running. A number of attempts have been made to change the timing of the final but having a school baseball match in the evening has been deemed ‘unethical’ by the education ministry.

For 2012, the government investigated whether some of the larger users of energy could temporarily halt operations for the few peak hours to manage demand. As was the case in 2011, public buildings turned off lifts, drinks machines and lights in order to manage the energy shortages during summer 2012. Legislation to ensure that buildings are better insulated would do much to help reduce demand and this issue is gaining increasing attention in political circles. The speed with which Japan’s housing stock revolves (an average of around 25 years) would make legislation regulating new build in this area particularly effective.

Conclusions

Direct impacts

There can be no doubt that the events of 11 March 2011 had a profound impact on Japanese energy policy. Initially, blackouts forced extreme energy-efficiency and demand-management measures along with large increases in the quantity of LNG and oil for power generation. The introduction of stress tests for nuclear installations was another direct impact. A number of EU countries were advocating an enhanced system
of stress tests several months after Fukushima. Stress tests were mentioned in the IAEA report as one of the ways nuclear countries could learn lessons from the Fukushima disaster. Japan’s response was to immediately introduce a two-stage stress-test system for all reactors before restarts would be permitted. During the summer of 2012, Japan began exploring the possibility of increasing the share of LNG bought on spot markets (as opposed to long-term contracts) in an attempt to reduce the massive cost of fossil fuel imports. Some other consumer countries have been concerned that because of their large volume, Japanese imports based on long-term contracts are distorting the market price for all consumers. Japan’s demand for gas is not likely to decrease drastically but it could reduce the cost by doing more spot buying. Japan keeps large stockpiles of LNG and oil, which should provide protection from short-term unavailability.

Policy changes
Perhaps the most fundamental impacts of the disaster have been on energy policy. Nuclear power was one of the key energy sources that supported Japan’s economic miracle of the 1960s–80s. Deciding to shift from having 50% of the nation’s electricity generated by nuclear by 2030 to a strategy that aims for non-dependence on nuclear power is a major change of course for the good ship Japan. In the overall energy mix, the proportion of nuclear may amount to no more than 15–20%. The short-term requirements for more gas, and the medium- and long-term one for renewables, have major implications for policy directions on both the supply and demand sides. As other countries have discovered, promoting renewables is not easy but it is worthwhile – from both the energy security and long-term cost perspectives.

As the experience of other countries suggests, Japanese authorities may need to adjust their FIT levels, which have been deliberately set very high. But given the huge increase in renewable energy capacity required in such a short timeframe, speedy introduction at generous levels was crucial and it is already having the desired effect. The deregulation that is beginning to accompany the FITs will be equally vital to success. If Japan is able to meet ambitious renewables targets, its economy will be in a stronger position to export green technology and expertise relevant to energy infrastructure. For a country as energy efficient as Japan, the challenge of finding demand reductions without compromising eco-
Japan's considerable technological, research and commercial strengths in smart grids and smart systems will also be an important asset for future demand management. This will be particularly key as the proportion of renewables in the energy mix rises. The Tokyo metropolitan government has introduced Japan's only emissions trading system, which is helping to improve the efficiency of buildings in the capital. If robust legislation requiring better insulation standards for new buildings could be introduced nationwide, the rapid turnover of Japan's housing stock would make it very effective in reducing energy demand. From an emissions perspective, one of the more worrying policy changes forced by the disaster has been the need to increase gas- and coal-generation capacity. Japan has world-leading efficient technologies in both areas, but locking in emissions for the 30–40-year life of these installations will not help Japan meet ambitious emission-reduction targets. There are plans for some switching from coal to gas that will help with emissions, but there are still no plans for the new plants to be built ‘carbon capture and storage ready’. In reality all that is required is to ensure that there is unused land next to the plant so that technology can be retrofitted once it is available.

Systemic changes: a crossroads with many possible pathways ahead
Another direct impact of the disaster was the major positive change in nuclear safety regulation. The new Nuclear Regulation Authority’s first challenge will be to create a robust system for regulating nuclear safety in Japan that is closer to international norms than its predecessor. The legislation establishing the new regulatory body ensures independence from nuclear promotion, including preventing inspectors returning to industry after joining the regulator – the so-called ‘no-return’ rule. The new legislation provides for a well-resourced, independent and powerful body with clear accountability to the public through the Diet. The NRA since its establishment has been clear that it does not want to be responsible for restart decisions but for technical safety certification. The commission and its secretariat will play a crucial role in rebuilding public confidence in nuclear safety. Creating a healthy nuclear
safety culture will take time, but Japan’s approach to doing so since the earthquake is considered to bode well for the future. Over the past year, the concerns about future use of nuclear power have developed into a far greater impetus behind the need to rapidly deploy renewables and exploit long held but unused resources like geothermal.

In spite of this, the full impact is far from yet being felt. The next stage in deploying renewables will be making them work in tandem with other energy sources. That will require major changes to the grid and the system that governs how it is managed – all of which will require electricity market reform. This will be a painful process for some but experience in other countries suggests that the prize will be reduced electricity costs for customers, more efficient use of Japan’s scarce resources and improved energy security. Some of this has begun with more companies now able to supply energy to the grid than before. But this could merely be the tip of the iceberg if renewables take off as many hope they will.

Japan’s energy system is at a crossroads. The new energy plan points Japan in the direction of new opportunities, a smarter and more flexible grid, electricity-market liberalisation and green growth, fields where the country can become a global leader. But implementing the plan and delivering the new energy mix will require difficult choices. If they can be made, low-carbon energy structure that is sustainable and efficient will have been created. One challenge for the government will be ensuring that all stakeholders, including business, power companies and the public, get the benefits from this new change.

The Energy Strategy indicates a direction, but there are many pathways to Japan’s goal of an energy system that can support their goal of an 80% cut in emissions by 2050. As renewables are exploited and Japan’s energy infrastructure is decarbonised, choices will need to be made between technologies, and demand-reduction requirements are likely to force lifestyle changes. Japan is already pioneering a number of ‘smart communities’ which bring together zero-carbon energy generation with smart systems, high efficiency buildings, electric vehicles and state of the art battery technology. This platform could be a valuable future export for Japan considering its competitive advantage in most of the technologies.

14. See Chapter 6 for more on this topic.
Finally, in charting a path to 2050, Japan is likely to face a choice about whether to become part of a future regional super grid – plans for which are already being taken forward. The concept is that ‘super-mega solar and wind’ generation plants planned in the desert of Mongolia will supply the rest of Asia with cheap, abundant, renewable energy. Mongolia has some of the world’s best natural resources for generating both solar and wind power. Much of the country is unpopulated, land is inexpensive and time differences can help with demand management. If exploitation of this resource can be combined with super high efficient cables, a regional super-grid including China, the Korean peninsula, and Japan, as well as other parts of Asia could be realised. Energy interdependence would be a big step of faith for the countries of Asia, but as Europe has discovered, regional interdependence is the best way to enhance mutual security. After all, while 20th century energy geopolitics was all about securing oil and other resources, the geopolitics of energy in the 21st century is about securing and increasingly decarbonising electricity.
CHAPTER SIX

Cold shutdown and global warming: Did Fukushima change Japan’s climate policy?

Gijs Berends

The Fukushima accident and greenhouse gas emissions

Nuclear power and climate policy are uneasy bedfellows. Environmentalists are sceptical about nuclear power because they distrust nuclear safety and are apprehensive about nuclear waste. At the same time, nuclear power does not release CO$_2$ during the process of generating energy and is therefore a potential contributor to the reduction of greenhouse gas emissions. Prior to the Fukushima-Daiichi nuclear-power-station accident, the Japanese government subscribed to the idea that nuclear power could contribute to meeting its emission-reduction target. In its June 2010 strategic energy plan, the government anticipated constructing nine new nuclear power plants by 2020 and 14 by 2030. These new plants were meant to ensure efficient supply, improve energy security and advance ‘environmental protection’. The Fukushima accident put an end to these ambitions, however, and construction plans for new nuclear power plants have been shelved. What is more, as a direct result of the Fukushima accident, nuclear plants that had shut down for regular maintenance could not resume operations because of popular...

1. I would like express my gratitude to Saori Nakasone for all the years that we worked together on climate policy at the Delegation of the EU to Japan. Her help in drafting this chapter was invaluable. I also would like to thank Jusen Asuka, Professor of Environmental Policy at Tohoku University, for his astute comments on my chapter.


and political opposition. Remarkably, by May 2012 all 54 nuclear power plants had grown idle (some reactors have since resumed operation). All this has thrown into doubt Japan’s preparation for a low-carbon society. In the absence of nuclear power, the share of power provided by thermal plants has increased, forcing Japan to import more oil and LNG. Some companies also started to rely on their own power generation, which depend predominantly on fossil fuels. These alternatives have a higher CO₂ footprint than nuclear power.

Tokyo Electric Power Co. (TEPCO), the finance-starved owner of the stricken plant, also decided to stop purchasing carbon credits in order to save money. Parts of Japanese industry live by self-imposed, voluntary emission reduction plans under which industry can buy carbon credits from other companies that have been successful in reducing their emissions beyond their own targets. These credits can be counted towards the emission reductions of the buyer. When TEPCO, Japan’s largest emitter of greenhouse gasses, no longer purchases credits, its emissions tally is likely to go up accordingly.

These developments notwithstanding, the disaster that struck Japan also led to a temporary decrease in emissions. Industrial production was sharply reduced after the earthquake. The earthquake and ensuing tsunami damaged local industry, which in turn disrupted global supply chains. For its part, the government, fearing that Japan’s power generation after Fukushima would not be sufficient to meet peak demand associated with hot summers and cold winters, launched an energy-conservation offensive. In the summer of 2011, it mandated 15% cuts in energy use for customers from TEPCO and from Tohoku Electric and asked citizens to voluntarily change behaviour and reduce their energy consumption. In 2012, the government again drew up plans for energy conservation. This time the government shied away from mandating cuts, but instead called for reductions between 5% and 15% mainly in the west of the country – the industrial heartland of Japan – which suffered most from the absence of nuclear power. These percentages later enjoyed a downward adjustment when the first nuclear power plants resumed operation in July 2012. The drop in industrial production together with the energy conservation efforts may have contributed to fewer emissions.

DID FUKUSHIMA CHANGE JAPAN’S CLIMATE POLICY?

What is then the overall picture of the impact of the nuclear accident on Japan’s emissions? Have they gone up or down? Only a few weeks after the Fukushima accident, TEPCO made a calculation that the total emissions of CO₂ would increase by 21 million tons per year if all electricity generated by the Fukushima-Daiichi plant were to be substituted by thermal power generation. This would correspond to 1.7% of Japan’s total greenhouse gas (GHG) emissions in 1990, the base year for its pledge of a 6% reduction under the Kyoto Protocol. In October 2011, the environment minister offered more disturbing figures. Responding to a question in the Diet, Goshi Hosono argued that if suspended nuclear-power plants could not resume operation and if thermal power plants were to replace them emissions would increase by no less than 12–14% compared with the base year of 1990. In January 2012, the Nihon Keizai Shimbun newspaper published a survey of almost 400 leading manufacturers and concluded that ‘greenhouse gas emissions by major Japanese manufacturers are expected to increase by 0.2% on the year in FY 2011 to approximately 388 million tons, complicating the country’s efforts to meet the 6%-emissions-reduction target set out in the Kyoto Protocol.’ An increase of 0.2% seems surmountable, but the concern among policy makers is that this relatively small increase in emissions in 2011 is only the beginning. If the economy and industry in Tohoku recover fully, if the willingness for voluntary energy conservation wanes and if most nuclear plants remain off the grid, emissions may increase much more. Indeed, in October 2012 unofficial projections were reported in the press showing that for both 2011 and 2012 actual emissions were going to be higher than in 1990, the base year under the Kyoto Protocol.

The Fukushima accident, then, will have an immediate impact on greenhouse gasses in Japan. Emissions are rising and are likely to rise substantially in the power sector in the near future. At best, Japan will have to work harder than expected to reduce emissions for the mid-term or settle for emission cuts that are less vigorous than desired. This has put environmental NGOs in an awkward position. Admitting that emissions are going up would play into the hands of the nuclear industry

After the Great East Japan Earthquake

lobby, which would then argue that it is better to restart idle plants for the sake of the environment. But in the debate on resuming nuclear power, the public seems less concerned with the environment and more with safety, radiation, possible power cuts, or the potential damage to Japan’s competitiveness.

This energy debate will have a tremendous influence on the climate policy the government can unroll in the years to come. So will the Fukushima accident then lead to changes in Japan’s climate policy? This chapter will try to answer this question by analysing change both in terms of the ambition of Japan’s emission-reduction target and in terms of the policies that the government will employ to meet this objective. The policy positions of both the main parties, the Democratic Party of Japan (DPJ) and the Liberal Democratic Party (LDP), will be examined.

Analysing change in Japan’s climate policy

Japan, with its neon-devouring capital, is a nation that consumes 25 billion chopsticks and 30 billion plastic bags a year – not to mention a large number of disposable umbrellas. There is one vending machine for every 20 people and Japan counts some 40,000 retail stores that are open all day. This may sound ominous but Japan’s environmental credentials are solid. Policies like the 3Rs (Reduce, Reuse, Recycle) started years ago and the oft-cited spirit of mottanai (‘don’t waste anything of value’) pervades Japanese society. The ‘Cool Biz’ campaign launched by the Ministry of the Environment – keep temperatures in the summer high but air conditioner use and demands on dress sense low – found supporters overseas. Households conscientiously separate garbage and particularly PET bottles and plastic. And smart design of electrical equipment and innovative technology has made Japan one of the energy efficiency centres of the world. Keidanren (Japan Business Federation – Japan’s strongest, most powerful and some would say, most conservative business lobby) has worked hard to distribute figures which show Japan’s power, petroleum, paper, copper, cement, iron and aluminium industries rank high in terms of efficiency. This has led to claims that ‘the energy consumption efficiency of Japanese manufacturers is the highest in the world’.

DID FUKUSHIMA CHANGE JAPAN’S CLIMATE POLICY?

But not all is well. Japan used to be the leader of solar energy power, but has been caught up by other countries. Japan may be strong in fields in which it is already strong by tradition – environment-friendly cars, electronics, manufacturing processes, green IT – but has been slower or reluctant to adapt to more modern or innovative ways to tackle climate change: emissions trading, carbon taxes, and feed-in tariffs. Japan has not found it easy either to meet its reduction commitments under the Kyoto Protocol. In Kyoto, Japan reluctantly agreed to a 6%-reduction target that had to be met in the years 2008–12. Japan’s emissions in 2007 climbed to 8.9% above the base year of 1990. One year later, emissions were still 1.9% higher, only to drop 4.1% – in large part due to the economic crisis – in 2009 compared with 1990. In December 2011, the Ministry of the Environment announced that in FY 2010, emissions were 0.4% down from 1990 levels. Since Kyoto, the basic tenet of Japan’s policy in international climate talks has been that an international agreement would have to include obligations for all the major emitters and that these should not be confined to a group of self-sacrificing front runners, something which, as many argued, had been the case with the Kyoto Protocol.

In the meantime, Japanese researchers reported to the ministry that climate change was already having an impact, identifying reduced yields, lower quality of agricultural produce, a decline in Japanese beeches and other trees, and broader distribution of mosquitoes carrying infectious diseases, amongst other things. The researchers also predicted, based on research that was done with the then largest computer in the world, that by the end of this century 1.37 million Japanese will be affected by rising sea levels. Rice yields will increase, but so will the frequency of crop failures. Beech forests in Shirakami, a world heritage site, will have disappeared. Torrential rains will increase, as will the number of days with a maximum temperature over 35°C. Incidentally, in 2007 a temperature of 40.9°C was measured in the cities of Kumagaya (close to

9. To meet the Kyoto Protocol target, countries can reduce emissions; buy credits from countries that have reduced more than required, or both. Japan is likely to meet its Kyoto Protocol target courtesy of the credit purchases.

10. Wise adaptation to Climate Change – Report by the Committee on Climate Change Impacts and Adaptation Research, Ministry of Environment, June 2008. The report was drafted by a project team consisting of 14 research institutes.
Tokyo) and Tajimi (close to Nagoya), the highest temperature on record in Japan since observations started.

In such a domestic setting, how would one go about analysing change in Japan’s climate policy? The first and easiest way is to see if the emission reduction target is going up or down. One can also examine whether this target is legally binding or whether it is merely a vision or an ambition. The second part of the analysis is to look at the policies used to achieve the reduction target.

There are essentially four policies to reduce greenhouse gas emissions. The first option is the voluntary approach. Emitters are asked to bring down the number of emissions in ways that they think are the most cost-efficient. There is no obligation, nor are penalties imposed. But peer pressure and naming-and-shaming could bring about behavioural change. A second option is to provide subsidies. Government, business and academia would interact to identify promising technologies that could bring costs and emissions down. Many such technologies require large upfront investments and the idea is that governments would provide the necessary funds. A third way is the legalistic approach. This means that the government will intervene and by law force emitters to reduce emissions. Legislation could for instance oblige car manufacturers to reduce CO₂ emissions and even tell them by how much and how they should do it (e.g. fuel efficiency, better tyres, less use of air-conditioning). The fourth and final option is to make emissions expensive or, in other words, to put a price on carbon so that those who emit more face higher costs than those who emit less. The two tools for this option are emissions trading and carbon taxation. Carbon taxation is a levy on CO₂ emissions and is a relatively straightforward instrument. Emission trading uses market principles to reduce emissions. First, a government-imposed cap reduces the total allowable amount of emissions, which creates scarcity. Second, industries receive a limited number of permits for emissions. Third, a trading mechanism allows those who emit less than planned to sell their surplus permits. Those who prefer to buy these permits from the market rather than reduce emissions themselves are allowed to do so.

Of course opinions on these four options differ. Some observers tend to be sceptical that voluntary restraint will ever be enough.11 Some

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are doubtful about the capacity of governments to find the most cost-effective ways of reducing emissions and fear that subsidies turn out to be another word for industrial policy. Others think that innovative research is the only likely solution. In reality, policy makers tend to offer a mix of these policy instruments and do not just simply opt for one.

**Climate policy before the Great East Japan Earthquake**

To assess Japan’s climate policy before the earthquake one needs to look at both long-standing Liberal Democratic Party (LDP) policy and the changes the DPJ wanted to introduce upon winning the 2009 Lower House elections. How to reduce emissions is a thorny question under any circumstances, but for a while the LDP was not even sure whether Japan should reduce emissions at all. After all, business circles believed that, given their energy efficiency, Japan had done enough in comparison to other major economies and that it was now the turn of other nations to make comparable efforts. It was said that there was no point in ‘wringing a dry towel.’

This strongly-held assumption made it very difficult for political leaders to impose mandatory emission targets on the private sector. The last three Japanese LDP prime ministers all struggled to define reduction targets for the near future. It is less painful for politicians to draw long-term plans, usually expressed in a target for the year 2050, than to decide on what is called a mid-term target, normally expressed as a 2020 target, as the latter would have direct and unpopular consequences for Japanese emitters.

For instance, in his speech ‘Invitation to Cool Earth 50 – 3 Proposals, 3 Principles’, Prime Minister Shinzo Abe, in office from September 2006 to September 2007, was comfortable talking about a 2050 target for reducing emissions, but shied away from imposing a 2020 target. His successor, Yasuo Fukuda, in office for the next year, launched the ‘Fukuda vision’ in June 2008, which determined a target for Japan ‘of reducing, by 2050, 60–80% of its current level of emissions’, but which was silent on a 2020 target. As PM Fukuda resigned after one year in

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After the Great East Japan Earthquake

office, it fell to his successor, Taro Aso, to make a decision. As a former CEO of a cement business, a sector that discharges high amounts of carbon dioxide, he may have understood the complexities of emissions and what reducing them meant for manufacturing plants. PM Aso settled on a GHG reduction target of 15% by 2020 compared with 2005. This translates into 8% compared with 1990 and was therefore only slightly more ambitious than Japan’s original Kyoto Protocol target.

So which of the four available policy instruments did the LDP choose to meet its target? None of the three prime ministers imposed a carbon tax or introduced emissions trading. There was also little legislative action to force reduction targets on emitters. The LDP stood by an existing climate law from 1998. This legislation obliges the government to take measures to fight off global warming, but it does not set legally binding targets. The LDP also confirmed its commitments under the Kyoto Protocol but ‘there are few mandatory measures to implement this target.’ And the three prime ministers continued support for the ‘Top Runner Programme,’ under which officials on a regular basis test the energy efficiency of 21 appliances (such as air conditioners, cars, and TVs) and then mandate the most efficient one as the new baseline for a few years down the road.

In the absence of carbon pricing or much legislative action, the LDP had to resort to voluntary measures and subsidies. In this it was first of all supported by Keidanren which had adopted an action plan on the environment, defined as a self-regulatory programme to reduce emissions voluntarily. This plan brought together 34 industries that sought to reduce emissions below 1990 levels for the years 2008–12, which coincides with the period to which the Kyoto Protocol applies. Campaigning to convince citizens to change their behaviour was another avenue. Under the so-called ‘Team Minus 6%’ campaign, initiated by an earlier LDP prime minister, Junichiro Koizumi, and supported by PM Abe, citizens were asked to reduce greenhouse gas emissions by one

15. The full title is The Law Concerning the Promotion of the Measures to Address Global Warming.
17. The Top Runner Programme is part of the 1979 Act Concerning the Rational Use of Energy, which does not mention climate change but is nonetheless important as most of Japan’s greenhouse-gas emissions come from energy use.
DID FUKUSHIMA CHANGE JAPAN'S CLIMATE POLICY?

kilogramme a day per person. In addition, PM Fukuda helped launch a voluntary system of carbon-footprint labelling so that consumers could decide whether they wanted to buy more environment-friendly goods. But PM Fukuda took his boldest step by introducing a voluntary emissions trading scheme. Participation and reduction targets would not be mandatory and no penalties would be imposed on those companies that failed to meet their target.

In addition to this host of voluntary measures, the LDP favoured subsidies as its second policy instrument to reduce emissions. The LDP believed that it would not be possible to meet the challenges of becoming a low-carbon society without creating new or break-through technologies. But it did not share the view that simply by being tough on emitters, the private sector would have sufficient incentive to create such technologies. The idea was therefore for the government to help invest in technologies which could significantly reduce emissions and cost and which could be commercially available by 2030. A total of 21 technologies were selected under what was called the ‘cool earth innovative energy technology plan’. Some technologies would lower emissions, others would raise energy efficiency.\(^\text{18}\) Technologies include photovoltaic, heat pumps, hybrid vehicles, light-emitting diode and so on. PM Fukuda set aside $30 billion under his ‘low-carbon technology plan’.\(^\text{19}\)

If the LDP chose voluntary measures and subsidies over carbon pricing and mandatory targets, then what would the DPJ do? Yukio Hatoyama, fresh from leading the DPJ to victory in the August 2009 Lower House elections and still ten days before his appointment as prime minister, went up against entrenched interests and announced a reduction target of no less than 25% from 1990, a remarkable jump in ambition compared with Mr. Aso’s 8%.\(^\text{20}\) A few weeks later, before the United Nations General Assembly, he said that ‘Japan announced this ambitious pledge because it wishes to serve as a “bridge” among countries with varied interests and to preserve the planet for future

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generations'. His announcement took everyone by surprise. There had been no inter-ministerial preparations, no committee of wise men, no consultations with business circles; indeed Hatoyama did not even have a cabinet when he announced the 25% target for the first time. Although he acknowledged that people feared the cost, he believed it would reinvigorate Japan's industry.

How was the DPJ going to achieve this? The DPJ was not going to ask emitters to voluntarily take action. Instead, they wanted to start mandating action. It set out to draft the Basic Bill on Global Warming Countervailing Measures which would stipulate that emission reduction was to be achieved through emissions trading and through carbon taxation. The key wording could be found in the bill's article 13.

With a view to making sure that the reduction of the Greenhouse gas emissions will be implemented, the Government will establish the Emissions Trading scheme, and examine the legislative measures needed, in parallel with the examination of the taxation system as countermeasures against climate change, and will come up with the final plan within one year after the implementation of this bill. (Italics added)

There were two factors that explained the DPJ’s success in changing the terms of the climate debate. First and foremost, the policy was driven by a small core of important and skilled politicians. Yukio Hatoyama (later prime minister), Katsuya Okada (later foreign minister), Sakihito Ozawa (later environment minister), and Tetsuro Fukuyama (later state secretary for foreign affairs) contributed to the DPJ’s climate change bill when they were in opposition. They centralised the party’s position on global warming and could outrank dissenters. These leading DPJ politicians also seemed to believe that a low-carbon economy would be worth pursuing. They thought that it would be good for the environment, it would establish Japan as a leader in green technology, and it would create conditions for both economic growth and employment gains.

Secondly, at the time Hatoyama launched his climate proposal, the institutional setting was very much in the DPJ’s favour. It had majorities in both the Upper and the Lower Houses. It had diminished the power

22. A full-page ad that said ‘Think. Even for a three-percent reduction, each household would have to pay 1.05 million yen’ was placed in major newspapers. The advertisement was sponsored by 59 industry organisations.
of ministry officials by abolishing interdepartmental meetings to prepare cabinet gatherings and by allocating more political appointees to the top echelons of the ministries. Business did not have much access. Keidanren had established few communication channels with the DPJ. They did not know many of the new politicians and had little influence over them. After the Keidanren leadership met the DPJ’s first prime minister for the very first time, PM Hatoyama said to the press that he and the business organisation had disagreed on many issues.

**What stopped carbon pricing?**

The DPJ looked impressive and powerful in the first months upon taking office but within a year the two factors that made the proposal successful – a core group pushing the issue and the favourable institutional setting – were no more. In June 2010, after less than a year in office, PM Hatoyama resigned. With his resignation, one of the lead drivers of the climate agenda disappeared from power and in the ensuing reshuffles

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**Figure 6.1:** Yukio Hatoyama, the driver for Japan’s ambitious climate policy after the DPJ came to power
most of the DPJ’s key climate proponents moved to posts with less influence on the climate debate. Naoto Kan, the new prime minister, included global warming as one of his core policies upon his election, but then found little appetite for the subject. He was known to only lukewarmly support the emissions trading scheme (ETS) concept, which explains why he did not include it in the DPJ’s Upper House election manifesto, a step noticed by all stakeholders. In the July 2010 elections, the DPJ lost its majority in the Upper House. The loss damaged the DPJ’s political capital and energised the opposition. The new prime minister also seemed more willing to listen to Keidanren – which was as sceptical as ever about carbon pricing – than his predecessor.

In the absence of the small group of committed politicians and without the institutional advantages, other, less benign factors at once came to the fore. For one thing, outside this core group within the DPJ there was little desire to introduce carbon pricing. Business circles were very sceptical of emissions trading. Voters did not consider climate change a priority. Parts of officialdom came out against emissions trading. Ministry of Economy, Trade and Industry advisors adopted documents that said ETS was too expensive, that it did not promote innovative technology, and that subsidies made much more sense. There was limited international lobbying for Japan to introduce a carbon tax or an emissions trading scheme. The European Commission professed to work towards an OECD-wide carbon market and invited major emitters like Japan to join them in this endeavour.23 Also the OECD encouraged carbon pricing in Japan.24 But this hardly constituted pressure.

Additionally, arguments that carbon pricing was not suitable for Japan gained currency. Stakeholders argued that voluntary approaches worked well. Japan has some of the world’s oldest voluntary environmental agreements, even extending to fields such as biodiversity and solid waste generation.25 Others have argued that the cost of reducing emissions in Japan is higher than in other developed countries because its industries are more energy efficient. This would mean that under

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emissions trading, permits will trade at a higher price than elsewhere. Officials fear that linking Japan to an OECD or global carbon market would result in a large amount of purchases abroad in markets where permits are cheaper and hence a flight of capital.

By the end of 2010, support for carbon pricing had all but disappeared. The cabinet decided in late December 2010 to postpone the enactment of emissions trading and cautioned against ‘hasty’ decisions and suggested ‘careful’ consideration before any specific legislative action on emissions trading should commence. This language was interpreted by most that ETS was off the agenda.

**Climate policy after 11 March 2011**

Any change in the use of nuclear power, let alone dramatic change, affects climate policy. Yet since the Fukushima accident, few politicians have talked about global warming. Prime Minister Yoshihiko Noda, who succeeded PM Kan in September 2010, did not pronounce himself on the subject as he was submerged in debates on nuclear safety, energy policy and his proposal to double the consumption tax. Environment Minister Goshi Hosono, who became a prominent politician in the aftermath of the Fukushima crisis and who doubled as state minister for nuclear power policy, did not broach the subject of emissions trading in the 18 months after the events. Regular meetings between MPs and NGOs to discuss environmental policy were no longer held.

This limited attention to global warming was not unexpected. Citizens and policy-makers were concerned with nuclear safety, looming power cuts or Japan’s declining competitiveness. Concerns for public safety overrode weariness about growing emissions. But of course the energy predicament would by and large determine the ambition of Japan’s climate policy. How many nuclear power plants were going to be operational and how many were going to have to be replaced by CO$_2$-emitting thermal power plants? How much can Japan rely on renewable energy sources and by when? Without answers to these questions, it was not evident which level of emission reductions would be feasible.

Was Japan’s 25%-emission-reduction target going to survive? In all fairness, the reduction target had never been very anchored. The DPJ had tried to enshrine the target in its draft global warming legislation, but this bill had never made it through the Diet. (It had been tabled in
consecutive Diet sessions but had never been voted upon.) To assess whether in the light of Fukushima the 25% target was still reasonable, a somewhat intricate structure was put in place to advise the prime minister. Under the cabinet office, an Energy and Environment Council (EEC) was established that would consider energy and climate questions as part of the same equation. This council would hear advice from three subordinate organs: the Central Environment Council (CEC), which contemplated climate questions and which came under the Ministry of the Environment; the Advisory Committee on Natural Resources and Energy (ACNRE) which was run by METI and which studied the future of Japan’s energy policy; and the Atomic Energy Commission, headed by the cabinet secretariat, which advised on the future of nuclear policy and on spent fuel management. Sourcing opinions and advice from three different consultative bodies, it was thought, would increase the chances of the prime minister receiving impartial and inclusive counsel.

Changes to Japan’s emission reduction target

In the earthquake’s aftermath, there was nothing clear-cut about what the nuclear accident would mean for Japan’s 25%-reduction target. Vice Minister for the Environment Hideki Minamikawa said during climate talks in Bangkok that it would be subject to discussion. A few weeks later, then environment Minister Ryu Matsumoto said that there were no immediate plans to change the target. However, by spring 2012, when all nuclear reactors had grown idle, there was no doubt that the emission reduction target would change. For one thing, as part of the CEC’s deliberations, the National Institute of Environment Studies

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Source: Central Environment Council, Measures to Tackle Global Warming After 2013
(NIES) published study results in May 2012 which said that even with nuclear power at full capacity, emissions reductions by 2020 could not be higher than 19% (compared with 1990 levels). This alone put into question the 25% reduction target proposed by the DPJ.

But of course, a scenario that assumed extensive use of nuclear power was never very probable. Therefore, NIES added, if no nuclear power plants restarted in the years ahead, Japan would be unable to reduce emissions by more than 2–11%. When the CEC, heeding this NIES analysis, delivered its advice to the EEC in June 2012, it declared that the maximum feasible reduction by 2020 would be no higher than 15% (see Table 6.1 opposite).

As the table illustrates, the advice lists six scenarios, with corresponding reductions ranging from 5% to 15% in 2020, and from 25% to 31% in 2030 depending on assumptions of (a) economic growth, (b) share of nuclear power and (c) the degree of government action to reduce emissions.

The CEC was however not the only council to submit findings to the EEC. The latter had to take into account ACNRE’s contribution too. And ACNRE, which resides under METI, tends to look more at what emission reductions mean for Japan’s industry. Its estimates say that a 20% reduction by 2030 would cost up to ¥81 trillion.26 This explains why in the EEC’s final report the feasible reduction targets were once again adjusted. The EEC report holds that maximum possible emissions by 2020, under a scenario involving widespread use of nuclear power, would be no higher than 10–11% (see Table 6.2 above).

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Irrespective of these differences, all reports point to a downward correction of the emission-reduction target and to an abandonment of the 25% target. And all reports also predict that only by 2030 would a cut of around 25% be feasible. One could therefore conclude that the Fukushima accident delayed the schedule for creating a low-carbon society by ten years. But that would be an optimistic scenario given that in September 2012, the EEC announced that it was considering a reduction target of not more than 20% by 2030.27

For any new reduction target, one would still have to decide whether this would be a domestic target only. In other words, could Japan also count carbon credits – for instance by purchasing emission reduction credits overseas from countries where emissions can be reduced more cheaply – or would the prime minister opt for a purely indigenous route?28 Another critical question is whether any new reduction target will be made legally binding. One option is to draft fresh legislation that will stipulate how much reduction is required. Another is to amend the DPJ’s aforementioned draft climate change bill or the 1998 climate law. If the prime minister does not want to lay down the target in national legislation, he could adopt a cabinet decision, which also has legal force. A final option would be to merely announce the target and nurture it with moral energy.

One would have to add a word here on how the Japanese government has assessed the revisions for its mid-term target. There are in essence two ways to decide on a reduction target. One can decide on the basis of ‘necessity’ or on the basis of ‘feasibility’. Developed countries could look at what scale of reduction is needed for global warming to be contained. There is a general agreement that developed countries would need to reduce emissions 80% by 2050. In order to meet that target in the most cost-effective way policy-makers can then produce scenarios as to what a country’s mid-term targets ought to be, say for 2020, 2030 and 2040.29 Or policy-makers could decide on the basis of which reduction is feasible.

28. Some question whether Japan can purchase such credits when it has not signed up to the second commitment period of the Kyoto Protocol.
ble within their country. This is usually related to what a country or its industry can economically afford. PM Hatoyama seemed more driven by ‘necessity’ when he announced the ambitious 25% target. He argued that he would not leave the environment ‘at the mercy of the tides of globalism’. But since the Fukushima accident Japan has gone back to deciding a target on what it deems ‘feasible’, as was the case under the LDP’s PM Aso. And this feasibility, Japan argues, depends on the three factors of economic growth, the share of nuclear power in the energy mix and the strength of the policy measures that Japan wants to or can impose. (In Japan, the concept of the ‘cost of inaction’ – if countries do not make painful efforts now, sacrifices down the road would only become more demanding – has never been very influential.)

A downside of using these three factors though is that there is naturally wide disagreement on each one. One CEC member criticised the proceedings by saying that ‘we are being told to think about how to cut a pie into pieces without knowing the size of the entire pie’. Other panel members questioned the fact that there were so few concrete actions in the final report. Indeed, how can the strength of policy measures be a factor in deciding the future emission reductions target when it is not clear what these policy measures are?

Fukushima and new policy measures: the fate of carbon pricing

The LDP governed through voluntary measures and subsidies; the DPJ upon taking the reins of government tried carbon pricing. How did Fukushima affect the choice of policy instruments? The accident more or less cemented the reluctance to introduce emissions trading. First, the already limited number of supporters has dwindled even further. Keidanren remains opposed and will challenge it without reservations. The outside pressure on Japan to consider market mechanisms – already limited – has grown fainter after Fukushima given the nuclear dilemma and challenges of reconstruction that Japan faces. Voters and politicians became concerned with reconstruction, the power supply, the consumption tax and public safety – not climate change.

Secondly, some argued that emission trading has grown even less suitable in the Japanese context. Due to the nuclear crisis electricity

prices have been on the rise, and rising costs for Japanese companies have spurred businessmen to argue that they would leave Japan for greener pastures if conditions did not improve. Amidst concerns about the hollowing-out of Japanese industry, few politicians dare to suggest that emission trading, a controversial proposal under any circumstances, is now the right path to take. Thirdly, the DPJ still had to face its lack of a majority in the Upper House, while it feared that upcoming elections could jeopardise its majority in the Lower House. All this combined to create a mood in Tokyo that has not been very sympathetic to emissions trading. The common understanding is that any proposal to adopt it is likely to stay in the waiting room for a while longer.

As an alternative to emissions trading, we have seen that a tax can be imposed to put a price on carbon. And in this the DPJ delivered a legislative achievement. In March 2012, a proposal for a carbon tax that was resubmitted after a failed attempt in 2011 made it through the Diet – almost unnoticed. It did not receive wide media coverage and many climate observers missed the event. The carbon tax, or the environment tax as it is called, is essentially a top-up of already existing fuel and coal taxes. The tax amounts to ¥289 per ton of CO$_2$ and is anticipated to lead to annual revenue of ¥260 billion in 2016.

The adoption of a carbon tax may be considered a success, but in fairness it is not a triumph. In 2010, calculations held that the tax would by and large lead to a CO$_2$ reduction of not more than 0.2%. Japan, it seemed, wanted a tax, not so much to reduce fuel and coal use, and hence emissions, but to create revenue that could be used for other emission-reduction measures. This explains why Keidanren could accept the tax. Not only was it a modest tax but the revenues would flow back to the private sector. Indeed, documents from METI show that the revenues are to be used for energy saving installations (such as energy-efficient housing); for the introduction of renewable energy; the promotion of diversified energy; and the promotion of innovative technology.

More problematic was the DPJ’s concomitant intention to lower the petrol tax, a proposal included in its 2009 election manifesto. This could have offset the modest emission reductions anticipated by the carbon tax. The Diet has been debating whether rising petrol prices do not justify eliminating what is a ‘temporary’ rate of the petrol tax. Such a decision would diminish the effects of a carbon tax.
DID FUKUSHIMA CHANGE JAPAN’S CLIMATE POLICY?

If emission trading remains on the back-burner and if the environment tax is not designed to reduce emissions, how then exactly is the government going to meet its new reduction target? One can expect some legislative proposals for LED lighting, energy-efficient housing and construction, and maybe some suggestions for the decarbonisation of the transport sector. But at the time of writing, such proposals were not yet being openly debated. The adoption of a law extending a feed-in tariff (FIT), which was until recently limited to the purchase of surplus solar energy generated by households, to all renewable energy sources has been crucial. The FIT legislation requires utilities to purchase the renewable energy from all types of approved suppliers at a predetermined purchase price.32

As for new voluntary measures, one can expect additional measures as soon as the practical implications of a new reduction target become clear. Keidanren is to review its voluntary action plan, set to run its course by the end of 2012. It has professed to be committed to helping develop a low-carbon society, but it has so far refrained from adopting numerical targets as long as it remains unclear how Fukushima will affect the growth in industrial emissions. In terms of subsidies, the environment tax will feed revenues into low-carbon technologies on top of already designated funds for promising technologies. In summary then, after a short-lived effort to introduce carbon pricing, the DPJ had to resort to subsidies, considered only limited new legislation and continued to count on voluntary measures. In this, its policies turned out to be similar to past LDP policy.

Japan’s position in international negotiations

During the international climate talks in Cancun, Mexico, at the end of 2010, the Japanese delegation took the floor to announce that Japan would not accept reduction targets under an extension of the Kyoto Protocol ‘on any conditions or under any circumstances’.33 Japan’s scepticism about a second commitment period was known, but this hard-line stance was something of a surprise to many in the climate community. Japan’s contention was that the Kyoto Protocol only covered 30% of the world’s emissions and Japan did not consider it fair on its industry to prolong emission

32. For more details, see Chapter 5 by Richard Oppenheim in this volume.
reduction efforts whilst competitors in other emitting countries faced no such burden. It wanted an agreement that would bind all major emitters including China, India and the US.

It is important to note that Japan took this position before the Great East Japan Earthquake. It was the lack of perceived fairness – not Fukushima – that caused Japan to become a tougher partner in international climate talks. But Fukushima may have validated the position of Japan’s negotiators. After all, why should they not strive for a level playing field when Japan’s industry has been hard hit by the earthquake, the tsunami, the rising electricity prices and looming power cuts? In the run-up to the Durban Summit, or as it was known, COP17, Japan therefore reiterated its position by arguing that it would not sign up to a legally binding extension of the Kyoto Protocol, nor pursue a political, de facto or symbolic application.

This is not to say that, despite some scepticism amongst officials about their feasibility or reliability, Japan is against internationally binding targets. Japan remains a proponent of a global framework that would embrace all major emitters. Japan was therefore content that in Durban the parties agreed to work towards such an agreement to be concluded by 2015, and which would stipulate commitments for all emitters from 2020 onwards. But what then are the obligations of Japan’s emitters ahead of 2020? The absence of domestic, legally binding targets for Japan’s emitters, the expiry of the Kyoto Protocol and Japan’s categorical refusal to sign up to the second commitment period of that protocol have together rendered Japan’s legal framework rather undemanding – unless the government introduces new domestic legislation.

Conclusions
Since PM Hatoyama’s flash-in-the-pan announcement of a 25%-reduction target back in 2009, climate policy has become more mundane. Japan has refrained from signing up to an extension of the Kyoto Protocol. A proposal to introduce emissions trading in Japan has been shut down. And since 1998 not much new climate legislation has been adopted. But none of this, though, was due to the Fukushima accident. For an explanation one would have to look at long-standing views that have pervaded the climate debate in Japan: Japanese industry has already done enough; other emitters need to do their bit; reducing emissions in
an energy-efficient country is too expensive; emission trading is not a respectable option; and mandatory targets and carbon pricing do not fit traditional Japanese policy-making.

But Fukushima certainly has had an impact. Nuclear power plants that do not emit carbon dioxide have been replaced by thermal power plants and in-house generators that do. Emissions are likely to rise in the near term and at the very least it will be harder to reduce them. What is more, energy policy dominates the political debate to the detriment of climate policy advocates. Not only politicians but also Japanese NGOs – not known to be generously endowed – simply do not have enough time or resources to influence both the nuclear/energy debate and climate deliberations.

Fukushima has led to one significant policy change. Japan’s target of a 25%-emission reduction by 2020 has not survived and will be replaced by a less ambitious target. Reductions of 20% or more are not expected before 2030 and one can conclude that Fukushima has led to a ten-year delay in the creation of a low-carbon society. What is more, Japan has once again decided on its mid-term target, less based on what is needed to fight off global warming and more on what is feasible. On the upside, the government managed to adopt a little-noticed carbon tax. And due to PM Kan’s insistence, FIT legislation was agreed in the Diet. The carbon tax and the FIT may have been existing proposals, but before Fukushima there had been no agreement to enact the legislation. One should therefore at least accept that without the Fukushima accident these proposals might not have seen the light of day.

But one could still argue that Japan did not really move very far away from its traditional toolbox to fight environmental challenges. The carbon tax was modest and therefore did not really ‘put a price on carbon.’ What is more, Fukushima reduced the already very limited appetite for emissions trading. As a result, carbon pricing has not made many inroads since the earthquake. The DPJ will continue to rely on existing voluntary measures. The most important of these will be Keidanren’s post-2012 self-regulatory action plan. This plan for now remains undefined as Keidanren awaits the ramifications of the government’s new energy policy. Existing subsidies for promising technologies are being reinforced now that revenues from the carbon tax are being channelled to the private sector. And some legislative proposals to make certain sec-
tors more energy efficient (transport, housing, lighting) will eventually be proposed. With that, the DPJ’s climate policy became very much like the past LDP climate policy.
CHAPTER SEVEN

Rebuilding farming in Tohoku:
A new frontier for Japanese agriculture?

Carla Boonstra

Direct impact: Agricultural sector disproportionately hit

Of all Japan’s economic sectors, agriculture, forestry and fisheries were disproportionately hit by the 11 March 2011 Great East Japan Earthquake. Out of Japan’s 47 prefectures, 16 suffered or are still suffering from problems in the agriculture sector. When we include the fisheries sector, 28 prefectures were affected either directly as a result of the earthquake and tsunami, or indirectly as a consequence of the crisis at the Fukushima-Daiichi nuclear plant. The earthquake and subsequent liquefaction damaged land, facilities and irrigation systems. The tsunami not only washed away livestock and agricultural land, but also left behind soil that had both subsided and been affected by salinization. The radioactive fallout left areas highly contaminated, which made agricultural produce unmarketable. Aggravating this was the damage done to the image of Japan as a producer of safe food. Physical damage to, and disruptions in, the supply chain were further compounded by an immediate energy shortage. Livestock lacked feed, and fresh produce could not be cooled, stored or transported. This triggered a run on food in the Tokyo metropolitan area, leaving shelves emptied of staples such as milk, water and instant food. But above all, the triple disaster exposed structural flaws in the agricultural and fisheries sector in general. Given the present state of

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Japanese agriculture, characterized by its inefficient way of production due to its small-scale, greying farmers, a lag in applying the latest technologies, and the lack of incentives as a result of comfortable support schemes, it will be a significant challenge to overcome the disaster and rebuild the sector.

According to the Ministry of Agriculture, Forestry and Fisheries (MAFF), the total damage to the agricultural, forestry and fisheries sector throughout Japan amounted to ¥2.43 trillion. The fisheries sector took the heaviest blow: ¥1.26 trillion. Agriculture accounted for almost 40%, or ¥950 billion, affecting 18,000 farms. Over 23,000 ha, or 2.6%, of the agricultural area in Aomori, Iwate, Miyagi, Fukushima, Ibaraki and Chiba Prefectures was flooded, decreasing the available land for agricultural production in 2011 by 19,000 ha. Damage to the forestry sector came to ¥215 billion. Further down the chain, 75.6% of food business operators were affected as sales declined or wholesale prices increased. However, the economic loss does not stop there. Contrary to other economic sectors in the stricken Tohoku area, it will take much longer to rebuild the agricultural, fisheries and forestry sectors because the de-salinization and de-contamination of soil is a lengthy process. As a consequence, many farmers are left without production means and therefore without income. Moreover, most farmers are over 65, making it more difficult for them to purchase new machinery and restart their farming operations, let alone alter their farming methods. Younger farmers, especially from Fukushima Prefecture, sought refuge in other parts of Japan to start up new businesses, for example in Hokkaido. In addition, farmers had to regain the trust of consumers regarding Japanese food safety both domestically and abroad. Overall, food exports declined by 10% from ¥444.5 billion in 2010 to ¥398.1 billion in 2011.

Iwate, Miyagi and Fukushima Prefectures (the three closest to the 9.0-magnitude earthquake’s epicentre) have borne the brunt of the

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3. Ibid., p. 5–6.
4. Ibid., p. 21.
5. Ibid., p. 5–6.
6. The Japan Times, ‘75.6% of food firms affected by March 11’, 7 September 2011.
disaster: almost 90% of the total damage. In spite of their small share of Japanese agricultural production Iwate, Miyagi and Fukushima are known throughout Japan for their high quality produce.9 Fukushima ranks among the top producers of such fruits as peaches, apples and pears, and vegetables like tomatoes and cucumbers, as well as leaf tobacco and raw silk.9 Iwate is Japan’s third-ranked producer of apples and garlic, and fifth when it comes to pears. Miyagi and Iwate are also known for their beef brands, such as Iwate’s Maezawa Beef and Tankaku Beef, and Miyagi’s Sendai Beef.10 Although none of the three is in the top ten of major producing agricultural prefectures in Japan, together they are regarded as the ‘vegetable garden of the Tokyo metropolitan area’ playing an important role as supplier of fresh food to Tokyo consumers, and thus the impact on the capital’s citizens was considerable.11

Agricultural policy before 11 March: a sector under pressure

Protected, fragmented, ageing, threatened

The triple disaster clearly exposed the structural characteristics of the agricultural and fisheries sector. The overall economic importance of Japan’s agricultural sector is limited. The share of primary agricultural production in Japan’s GDP is small, contributing around 1% to the total.12 Farming is characterized by small family farms on irrigated paddy fields traditionally and mainly for the production of rice. Farmers work their fields and crops with great care, attention and skill, and with the high degree of perfection that is characteristic of the Japanese working method. More often than not – as seen in 76% of commercial farm households – farming is a part-time occupation.13 However, in Japan the importance

8. Iwate, Miyagi and Fukushima Prefectures have a combined total of 270,000 active farmers in the sector (10.4% of the national total) on 376,000 ha (8.9% of the national total).
11. With a combined agricultural output of ¥629.6 billion, the share of the three prefectures in total national production is limited to 7.6%.
of agriculture and rice growing is perceived to be of great cultural and strategic importance, far beyond its economic value. Rice is the staple that has fed the Japanese people for centuries and its production and abundance is seen as being essential to the national well-being. To this day rice paddies are, for many Japanese, still an important part of an attractive cultural landscape and they feel strongly about preserving them, even at considerable costs. Yet in spite of this sentiment approximately 10% of land destined for agricultural production lies bare, particularly in hilly and mountainous areas, and in the case of rice paddies, this figure rises to as much as 40%.

Given the above, it is not surprising that agricultural production and policy are still determined by rice even though its relative share in the sector has dwindled to 22.5% of total agricultural output in 2008 in favour of vegetables and livestock. Preserving rice production inevitably implies lost opportunities for other products, such as the high-value and specialty meat, fruit and vegetables that can be profitable and competitive in a land-scarce environment.

Even before 11 March, the agricultural sector in Japan was under heavy pressure. Given that the average age of farmers is 66, the natural extinction of the farm community is inevitable unless it is revitalized with fresh blood. Japan's ageing society, together with an exceptionally low birth rate, not only threatens to decimate the farming community, it also decreases the demand for food supplies. The only way to sustain domestic production is to re-focus agricultural production on exports. The demographic trend not only affects the agricultural sector, but also the regional economies outside the major urban areas. Strengthening the agricultural base is perceived to be a fundamental part of revitalizing regional economies.

The fragmented and inefficient Japanese agricultural sector is further threatened by the various negotiations that the government is currently engaged in as part of its basic policy on comprehensive economic part-

Figure 7.1: Two rice field workers in their 80s having a rest in Hiwada, 50 km from the Fukushima-Daiichi nuclear power plant, August 2011. Rice contamination would be a major issue after the harvest in October.

Partnerships, which favours participation in free trade agreements such as the Trans-Pacific Partnership (TPP) and bilaterally with Australia and the European Union. Given the current inefficient production methods and the subsequent high production costs, it will be difficult for Japan to become competitive. Only by drastically reforming the agricultural production structure might the sector withstand and survive the challenges.

The food self-sufficiency rate (based on calories) is a key indicator of the state of the Japanese agricultural sector for politicians and policy makers alike and is closely related to the Japanese sense of food security, a concern that has deep historical roots. These anxieties originate in the constraints on total agricultural output arising from the limitations of land area and land use, as well as from periodic famine and food shortages in the past. Concerns about national food supply were evident before World War II and also in the immediate post-war period when rapid increases in rice production were necessary to feed a nation on the verge of starvation.18

By 2010, the food self-sufficiency rate had reached an historic low, hovering just under 40%, meaning that about 60% of food has to be imported. In recent times, government policies have been driven by an obsession to increase this figure, but these efforts have so far been in vain. The inefficiency of the sector is partially to blame for this. The average size of a farm is 2.19 ha, but when we exclude Hokkaido, where the average farm size is over 16 ha, the average of less than 1 ha paints a far bleaker picture. This fragmentation is partly the result of Japan’s topography. As a mountainous nation, land is scarce and only 30% of it is suitable for agricultural or urban use. But the fragmentation also results from drastic land reform after World War II during the US Occupation of Japan under Supreme Commander for the Allied Powers General Douglas MacArthur. The reform was meant to eradicate the landlord system, which was considered a source of infinite evils, and to replace it with a system of owner-farmers. The legal maximum on farmland holdings was set at 3 ha. However, operational farm size declined on average to 0.99 ha in 1955.

Clearly this is a serious impediment to the necessary economies-of-scale that would enable production per hectare to increase and costs to decrease. However, land policy and landownership in the Japanese context is a sensitive issue. Agricultural landownership is historically based on family operations. Until the turn of the 21st century joint stock companies were prohibited from entering the farming business. Realizing that adhering persistently to this policy would not help raise the self-sufficiency rate, the government has since 2000 prudently implemented successive deregulatory measures allowing, under certain conditions, private sector entities to enter the sector.

Under the current system of agricultural support, farmers lack the incentive to produce in an economically more sustainable way. The national sector is protected by market-price support through tariffs and...
tariff-rate quotas and payments to farmers based on output. Although Japan has progressively reduced its support to agriculture over the years, it is still twice the OECD average. Around 50% of gross farm receipts come from producer support. Of this so-called producer support estimate, 87% is considered by the World Trade Organization as being ‘most trade distorting’ because it maintains domestic prices for farm commodities at levels higher than at the border through the use of import tariffs, quotas and other restrictions. In the case of rice for example, Japan has a zero-tariff quota of 767,000 tonnes, but a tariff of ¥341 is levied on every kilogram of rice that is imported over that quota. This is equivalent to a tariff rate of 793%. Tariff rate quotas also apply to certain dairy products, prepared edible fat, dried pulses, vegetables, wheat, barley, ground nuts, devil’s tongue tubers, starch, and silkworm cocoons and raw silk. To increase the competitiveness of the sector after 2000, successive Liberal Democratic Party (LDP)-led governments prudently started to shift some of the agricultural subsidies from market price support to direct payments to larger farmers who produce rice, wheat, barley, soybeans, sugar beet, starch potatoes or a combination of these crops. As part of its manifesto for the Lower House elections in 2009 the Democratic Party of Japan (DPJ) introduced an ‘individual income support system’ as ‘the main pillar of its agricultural policy’. It may have served electoral purposes, as the party won a landslide victory, but it was a setback for the development of agriculture as a more market-oriented sector. The support system was after all more commodity-specific and available for all commercial rice farms irrespective of farm size. This combination of market price support and payments to farmers based on output sustains artificially high market prices to which consumers contribute twice: as consumer and as taxpayer.

Which way forwards?

It is clear from the above that the Japanese agricultural sector is at a crossroads and choices have to be made soon in order to preserve the

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23. Direct payments are not directly related to production or prices and as such are less trade distorting. In principle farms > 4 ha outside Hokkaido or >10 ha in Hokkaido.
sector for future generations. The big question is whether the government has the political courage to implement the inevitable, necessary and drastic changes to turn the tide. Opposition to major reform is strong from the Japan Agricultural (JA) co-operatives and its member farmers, from politicians with vested interests in rural areas, and from MAFF. Together these stakeholders constitute the so-called LDP–MAFF–JA Iron Triangle. JA represents the interest of primarily small farmers and its principal business includes providing farm guidance to improve farm management, support for production (farming supplies) and marketing (gathering of farmers’ produce at collection centres and selling to wholesale and retail markets). But JA’s role goes further. In rural areas JA provides financial services like banking and insurance not only to farmers, but also to non-farming rural members. It has a clear interest in keeping the scale of farming small as the commission it gets from providing these services is significant. The bigger the farm, the more lucrative it is for the farmer to sell and buy directly outside the JA system. In order to maximize its profit, JA approaches local politicians, particularly the LDP Diet members who have close connections with MAFF, also known as nōrin-zoku, asking them to pressure MAFF to keep the rice price high. LDP nōrin-zoku members have an interest in doing so because in return they receive the farmers’ votes. MAFF in return receives larger budgets. However, JA’s power dwindled somewhat when in the 2009 general elections the LDP lost ground in rural areas, even though these regions had traditionally constituted its power base. This became clear when in November 2011 Prime Minister Yoshihiko Noda announced Japan’s intention to participate in the TPP despite fierce opposition from JA.

That said, it is not as if there is no awareness at all of the urgency to reform the agricultural sector into a more efficient, market-oriented one. Over the past decades, subsequent governments have drawn up policies with the objective of increasing agricultural production, firstly triggered by the coming into effect of the GATT Uruguay Round Agreement on Agriculture on 1 January 1995. Until then Japan had been quite successful in protecting its domestic market by import restrictions, subsidies

26. Ibid., p. 7.
and price support measures. Under the Uruguay Round Agreement however Japan was forced to accept an agreed level of food imports in return for keeping high tariffs on rice and other products.27 To implement this agreement, domestic policy reforms were unavoidable.

One clear sign that agriculture was changing came with the New Basic Law on Food, Agriculture and Rural Areas that passed the Diet in July 1999. This law replaced the 1961 Basic Law on Agriculture in an effort to make the sector more efficient, market-oriented and competitive. Prior to July 1999, the main thrust of the law had been to reduce the disparity of productivity and income between agricultural and non-agricultural sectors. Under the new law basic policy principles were redefined as securing a stable food supply, fulfilling the multi-functional role of agriculture, achieving sustainable agricultural development, and achieving the development of rural areas. Additionally, the government was mandated to publish five-year plans, known as the ‘basic plan for food, agriculture and rural areas’.

LDP-led governments published two such plans, one in 2000 and one in 2005. These introduced a target rate for self-sufficiency, direct payments for farmers, and deregulation of farmland ownership. The 2000 plan set a self-sufficiency target of 45% to be achieved by 2010. In the 2005 plan, the target year was extended to 2015. As Japan had been forced to open its borders following the 1995 GATT agreement, the self-sufficiency target could be seen as a novel way to minimise imports and thus help protect the domestic market. The direct payment scheme was first introduced for farmers in hilly and mountainous areas ‘to compensate for disadvantages in agricultural production conditions so that such areas can maintain adequate production activities’.28 The movement away from price support to direct payments was further encouraged in 2007 by extending the direct payment schemes to core farmers of rice, wheat, barley, soybeans, sugar beet and starch potatoes.29

With the first plan, joint-stock corporations became able to purchase farmland on the condition that the stocks were owned only by existing farmers. (This condition was relaxed in 2001 by allowing 25% share ownership by public corporations.) The 2005 plan further allowed

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27. Ibid., p. 1.
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non-agricultural production corporations to lease farmland from local governments, although the purchasing of land was still prohibited.

In 2010, the DPJ-led government presented the third of these plans. The most striking deviations from the previous LDP plans were the increase of the food self-sufficiency rate target to 50% by 2020, the introduction of a new farm income support payment scheme for all farmers, as well as the introduction of the concept of agriculture as the ‘sixth industry’. The assumption here is that by combining and being involved with secondary and tertiary industry, agriculture, as the primary industry, could develop new local business and create new business opportunities \((1+2+3=6)\).^{30}

These three plans had all called for reforms, but in November 2010 Prime Minister Naoto Kan’s administration pushed the need for reforms one step further when it decided as part of its new growth strategy to adopt the ‘basic policy on comprehensive economic partnerships’. Essentially, this policy holds that Japan should negotiate trade agreements even with countries that would be competitive in agriculture. Recognising that agriculture would be most affected by trade liberalization, the administration pledged to first press ahead with fundamental domestic reforms in order to strengthen the competitiveness of the sector. This is why, in the same month, the Council for the Realization of the Revival of the Food, Agriculture, Forestry and Fishery Industries (CRR) was established ‘to examine and advance measures aimed at promoting both high-level Economic Partnership Agreements and the improvement of Japan’s food self-sufficiency and revitalization of its agriculture industry and rural communities.’^{31} The CRR was asked to formulate a basic policy by June 2011, at about the time that PM Kan was slated to decide on Japan’s participation in TPP. The CRR had only met four times when the Great East Japan Earthquake hit Japan, not only shaking the earth beneath the country, but its agricultural foundations as well.

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Policy changes after 11 March

First signs are positive

The process of reforming Japan’s agriculture into a more competitive sector, which had been prudently and incrementally deployed since the beginning of the 21st century, has considerably accelerated in the aftermath of 11 March. The devastated state of the agriculture sector in Tohoku seems to have provided the decision makers with the impetus necessary to drastically restructure the agriculture sector with a view to transforming it into an economically sustainable and competitive sector. The first signs of post-disaster policy aimed in this direction are positive.

Naturally, MAFF’s first concern was to alleviate the immediate needs of the many victims who took refuge in shelters by securing and providing food for them. In the first five weeks after 11 March, the ministry, in co-operation with more than 200 food companies, coordinated the provision of over 25 million meals, 53,000 cans of infant formula and 3.8 million litres of drinks. Only after the sea had retreated and water levels had fallen did the extent of the damage to farmland become evident. MAFF’s next task was to clear the land of all rubble and sludge, restore irrigation and drainage canals, and rebuild central wholesale markets and agricultural facilities. The triple disaster had also left most farmers without any income and so MAFF requested financial institutions to provide smooth finance and reschedule loans. It is therefore not surprising that in the first supplementary budget to provide emergency funding for reconstruction (May 2011) almost all the ¥381.7 billion available for agriculture were earmarked for restoring the necessary basics and purchasing agricultural machinery and inputs like seeds and fertilisers.32

But this was also the time to think about reconstruction, about reform and about presenting new visions. If the regional economy was in tatters, was this not the moment to rethink agricultural policy? A variety of panels and councils studied how to respond to the disaster and whether new ideas should be encouraged. Firstly, the Reconstruction Design Council in Response to the Great East Japan Earthquake (RDC), an advisory panel to the government, deliberated how to shape a vision for the reconstruction of the Tohoku region. After two and a half months

of deliberations, the RDC presented its report *Towards Reconstruction: Hope Beyond the Disaster* to PM Kan in June 2011.

The RDC unsurprisingly recommended a rapid recovery of farm-lands and irrigation/drainage facilities and the restart of farm management. But at the same time it strongly advised the government to present a future vision for agriculture that combined three strategies:

- The creation of ‘high added-value’ as a strategy to secure employment and improve incomes. The RDC argued that high added-value can be generated by integrating the various stages of the food production chain such as production and processing – the previously mentioned ‘sixth industry’ concept – by branding, or by introducing cutting-edge technology;
- The reduction of production costs to improve the incomes of farmers. Here the RDC mentioned the subdivision of farmland into larger plots;
- The diversification of farm management in order to secure new income sources. One possible way to generate additional income, the RDC argued, was by expanding core agricultural activities into green tourism, the idea being to take advantage of the appeal agriculture and villages historically have among the Japanese.33

More specifically, the RDC advocated the development of large-scale agriculture, particularly on wide, flat areas, and that when combined with the attraction of food-related industry to create higher added-value, and the diversification of farm management, these regions could become ‘top-runners in Japan in land-intensive agriculture’.34

But the government did not listen solely to the RDC. It also collected the opinions of the disaster-afflicted prefectures and municipalities before presenting a report called the *Basic Guidelines for Reconstruction* on 29 July 2011. This report turns the spotlight on agriculture, forestry and fisheries as key industries in Tohoku, ones which have the potential to serve as models for the rest of the country.35 To re-develop Tohoku

34. Ibid., p. 29.
as a new food-supply base, regions are encouraged to present a future vision along the lines of the three strategies outlined in the RDC’s recommendations. The report envisages a ‘new agriculture’ which includes an experimental study of large-scale agriculture that makes full use of advanced technologies, and which promotes collaboration between agriculture, commerce and industry by exploiting technologies and know-how from the manufacturing industry sector.

In the meantime, the CRR had continued its deliberations and also presented an interim report on 2 August 2011. It advocated a move towards the ‘sixth industry’ concept, the expansion of farm size to 20–30 ha in the case of flat land areas and 10–20 ha in the case of hilly and mountainous areas, and the utilization of resources in rural areas for energy production.

Taking these three reports as its starting point it was then MAFF’s turn to formulate a Master Plan for the Reconstruction of Agriculture and Rural Areas (26 August 2011). This provides a blueprint of policy measures that MAFF intends to implement to re-develop Tohoku as a new food-supply base and outlines four levels of ambition:

- Most pressingly to restore and consolidate farmland;
- Once farmland has been restored, the regional agricultural sector itself should be restructured to raise it to a higher level than before the triple disaster. Here the promotion of the sixth-industry concept again comes into view;
- The agricultural sector can serve as an example for the revitalization of the Japanese economy in general by acting as the motor for regional economic reconstruction. As PM Noda remarked in his speech on the first anniversary of the Great East Japan Earthquake: ‘I firmly believe that this period of difficulty must, and will, come to mark the start of a full-fledged revitalization of Japan […]. Through the creation of special reconstruction zones and other initiatives under the concept of “open reconstruction”, these regions will stimulate

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new domestic and overseas investment, creating jobs, driving the restoration of existing industries and enhancing innovations. The plan included measures to help farmers who had suffered from the consequences of the Fukushima-Daiichi nuclear accident.

The plan asserts that unless income is ensured for affected farmers who are awaiting the recovery of their farmland, the risk of land abandonment and of farmers leaving the region to seek their fortune elsewhere is more than real. All the same, the report warns that creating a ‘new agriculture’ without young(er) shoulders on which to prepare the sector for the future would be meaningless.

Plans abound but were they turned into reality? In the third supplementary budget to finance measures to reconstruct tsunami-hit regions, which passed the Diet on 21 November 2011, ¥1.13 trillion were earmarked for the agriculture, forestry and fisheries sectors, of which about 25% were allocated for agricultural recovery. This budget includes funds for the integration of agricultural land (¥1.1 billion) and the promotion of the development of the sixth industry (¥2 billion).

The actual implementation of the most innovative concepts of MAFF’s plan, such as large-scale farming and creating the ‘sixth industry’, was to be facilitated by the enactment of the Basic Act on Reconstruction from the Great East Japan Earthquake on 24 June 2011. First of all this defines the respective responsibilities of central, prefectural and local governments in the reconstruction efforts. The initiative to draft reconstruction plans lies with prefectural and local governments, while the role of the central government is more a facilitating and co-ordinating one under the newly created Reconstruction Headquarters in Response to the Great East Japan Earthquake. Furthermore, the act introduces measures to secure financial resources, and interestingly, creates the possibility of designating special zones for reconstruction that would provide special one-stop measures to enable communities to promote and execute reconstruction measures. In the case of agriculture, the act allows for a one-stop window for the approval of land conversion and


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for changing agriculture zones, and makes it possible to use farmland to build food processing or retail facilities, or plants for the generation of biomass energy.39

The government also started actively promoting exports and reached out to regain foreign consumers’ trust in Japanese food. After all, export markets will be necessary to absorb the anticipated surplus in production as Japan’s population is set to decline. The government has been rather inventive about export expansion. Part of Japan’s Official Development Assistance (ODA) is to be used to expand overseas sales routes for products from the affected areas. One measure to help the disaster-hit areas involves purchasing large amounts of canned seafood and other food produced in Iwate, Miyagi and Fukushima Prefectures for inclusion in foreign aid packages. To facilitate this, ¥5 billion of the 2012 ODA budget were set to be diverted to the region. ODA funds are also used in other ways to support the Tohoku region. For example, the earthquake-hit prefectures will be given priority as hosts for foreign trainees studying agricultural techniques and language. It is hoped that money will come into these areas if foreign trainees stay there for an extended time, paying rent and buying food and other goods.40

In a parallel effort, the government has gone a long way to convince trade partners of the safety of Japanese food. Historically, it was usually Japan which raised trade barriers over sanitation issues. This is the first time that Japan has been confronted on such a large scale with restrictive trade measures by its trading partners. The government misses no opportunity, at the WTO, in bilateral meetings, and even in newspaper advertisements, to stress that Japanese produce is safe and that on a scientific basis there is no reason to restrict trade. The vehemence and aggrieved manner with which the government has embarked on this crusade leaves the impression that Japan has not yet fully adjusted to the international world of agricultural exports.

Did anything change in practice? Hopeful examples

Ambition clearly exists, on paper at least, to raise the agricultural sector to a more efficient level than was the case before the 11 March 2011

disasters, and a legislative framework is in place to allow the journey towards reconstruction to begin. Although none of Iwate, Miyagi or Fukushima Prefectures is considered a major producing agricultural area in Japan in economic terms, the importance of the sector as a driver for regional development in all three prefectures is considered essential and thus its restoration has been prioritised. The general characteristics of the Japanese agricultural sector – fragmented, ageing, outdated – apply mutatis mutandis to the state of agriculture in the three prefectures affected most by the triple disaster. The question is not so much whether the prefectures have the potential to rebuild their agricultural sectors to the state they were in before the disaster struck, but whether they will be able to move forward in an aspirational manner and overcome the impediments in the previous status quo that blocked development of a sustainable agriculture sector.

The different characteristics of the three prefectures mirror the different approach to the reconstruction of their agricultural sectors. For Fukushima the road to recovery will be long given the complicated nature and long-term impact of the nuclear disaster. The first problem is how to further rid agricultural land of radioactive contamination. This needs to be done before local authorities there can even think about restructuring the sector. The prospects for Miyagi are most favourable as some of its agricultural activities are concentrated in the vast Sendai Plain. Agriculture in Iwate is more fragmented and it may be a bigger challenge to take the necessary steps towards a more sustainable way of agricultural production.

The Sendai Plain, situated between the city of Sendai and the Pacific coast, is suitable for new large-scale agriculture and intensive greenhouse horticulture because of the geographical characteristics (flat land) and excellent logistical connections (airport, harbour, and motorways). This is also acknowledged by municipal officials in Sendai, as agriculture is an integrated part of its earthquake-disaster reconstruction plan. It includes the designation of a special zone of about 3,000 ha for intensive horticulture and agriculture in the Sendai Plain, the so-called agriculture and food frontier (AFF). The majority (70–80%) of that area will be

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41. Average farm size in Iwate, Miyagi and Fukushima Prefectures is 2.26 ha, 2.29 ha and 1.71 ha, respectively.
dedicated to growing rice and the remainder will be used for intensive vegetable growing.

A consortium of companies, including IBM Japan Ltd. and Kagome Co., aims to build a 23-ha vegetable cultivation and processing facility in the Wakabayashi district near the coast. As desalination of farmland requires time and money, the plant factory will not use soil but water for cultivation (hydroponics). Energy will come from a mega-solar generation facility that will be built next to the complex, and from biomass boilers. The total volume of sales is targeted at ¥2.5 billion annually. The processed vegetables will find their way to the shelves of convenience stores and other major retail chains. The convenience store chain Seven-Eleven Japan and up-scale department store Takashimaya have both shown serious interest in participating in the project. Project costs have been estimated at ¥10 billion. Production is expected to start in the course of 2012 by Butai Farm Co. and other farmers’ groups affected by the disaster.

In the same area an experimental project is being carried out to create a new, low-cost and large-scale form of rice farming. A variety of cutting-edge technologies such as robots, GPS, and a system that uses light-emitting diodes will be applied to support field work, monitor the growth of rice and to prevent pests.

In Rikuzentakata in Iwate Prefecture, Granpa Co. – a company specializing in the development and marketing of air-dome type greenhouses for the indoor cultivation of fresh vegetables – started growing lettuces in these greenhouses in June 2012. Lettuces are grown on turntables about 20 metres in diameter, in a radial pattern starting from a hole in the centre. Younger seedlings are placed on the inside of the table with the more mature plants towards the edge. The turntable ensures the lettuce heads continuously face outward, which increases the spacing as the plants grow and simplifies the harvesting process. One greenhouse can produce 500 heads of lettuce a day. Granpa Co. is planning to build eight of these dome-shaped greenhouses.

The above examples share an approach to agriculture that deviates from the traditional one of rice cultivation. Most striking is that both projects are private-sector initiatives and this will likely influence both business management practices and the enterprises’ market-orientation positively. Modern technologies like hydroponic-based horticulture in
greenhouses, and the use of robotics and information technology-based solutions are being applied to overcome problems with saline soil, to secure food safety and to improve productivity. An additional effect of this approach is that it may appeal to and attract younger farmers. The AFF project in particular has the potential to become a textbook example of the concept of the ‘sixth industry’, thereby increasing the prospects of an economically sustainable agricultural sector.

The involvement of private businesses could turn out to be the key to success of the ‘new agriculture’ approach, but engagement by local authorities is essential as they are the focal point of the reconstruction plans and can play a role in generating local commitment. A big difference between the approaches in Sendai and Rikuzentakata is that the AFF project receives strong support from the local government of Sendai, which has a clear vision on how to rebuild the sector. In Rikuzentakata, however, the municipal government seems to be still struggling with the basic question of how to rebuild its community and is facing a conservative farming community less willing to change.42

Nonetheless, the first examples in Miyagi and Iwate give reason for hope. The AFF project, if successful, could show that large-scale agriculture is feasible in Japan, while the Granpa project shows that even in areas with limited land it is possible to boost productivity by converting rice paddies to greenhouse horticulture.

Conclusions: Tohoku as an example for the whole of Japan?

Food disappeared off the shelves of many stores immediately following the disaster. This was precipitated by a distribution crisis and the natural reflex of consumers to stock up on food supplies in times of emergency and uncertainty. There has never been any threat of a food shortage. The event has nevertheless made the Japanese public aware how domestic or international disasters can disrupt vital food supplies. The public now fears that ‘in the event of a real emergency, Japan simply cannot feed itself’.43

The primary reaction of the agricultural establishment to the events of 11 March was to flex its muscles against any initiative to reform the sector. To them, the Tohoku disaster proved to be another reason for the

42. Observations based on meetings with authorities of the municipality of Rikuzentakata.
43. Aurelia George Mulgan, ‘TPP off Japan’s trade agenda for the time being’.
sector, led by the JA, to oppose any further steps by the government to proceed with trade liberalisation as it believed that trade deals like TPP would deal a heavy blow to Japan’s agriculture sector and would be a major obstacle to reconstruction. Nonetheless, in November 2011 PM Noda announced an interest in starting preliminary talks about Japan joining the TPP free-trade agreement and Japan has been engaged ever since. The Great East Japan Earthquake did not change this push for trade deals. As confirmed by an anonymous member of the CRR, the recommendations issued in July 2011 would not have been any different if 11 March had not occurred.

The aftermath of the triple disaster may turn out to have been a blessing in disguise for the agricultural sector in the region. As the sector has been swept away, it has to be rebuilt from scratch. This provides an opportunity to develop a modern-style, sustainable and viable agricultural sector, which can cope with contemporary challenges. The first signs are hopeful as illustrated by the AFF project in Sendai and the dome-shaped greenhouses in Rikuzentakata, both mainly driven by private companies’ initiatives. Municipalities in the disaster-damaged region are receiving inquiries from agricultural operators across Japan, wishing to conduct large-scale farming. Most of them are young farmers pursuing cutting-edge agriculture, according to the Nikkei Shimbun. Government schemes to urge small-scale farmers to retire are being expanded and elder generations are being asked to make way for younger farmers who can expand operations and improve efficiency. The triple disaster has accelerated the implementation of inevitable changes. Large-scale farming is no longer taboo. The agricultural establishment, including MAFF and the JA, seems to have resigned itself to the fact that expanding the scale of farming is necessary if a sustainable sector is to be maintained and if its competitiveness is to be strengthened.

To what extent will Japan succeed in making the most of these opportunities? It depends on whether Japan will be able to give adequate answers to some crucial questions. First of all there is the issue of land rights. MAFF’s master plan for the reconstruction of agriculture and rural areas, and the special zones for reconstruction legislation, should make it easier to change land use and increase scale, with stimulus com-

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ing from government subsidies to farmers to encourage them to sell or let their land. To make large-scale integrated farming projects economically feasible, the involvement of private commercial companies is essential to raise the necessary funds. Resistance among the local farming community however is strong. Are older farmers really willing to give up farming and renounce their historical land rights? Even if state-of-the-art facilities are actually realized, there is still a risk of failure as the new technology may not match cultivation methods or farmers may not have been sufficiently (re)trained to apply new cultivation methods efficiently. The output may then not meet expectations. The projects may turn out to be costly white elephants, discouraging further new initiatives.

But perhaps the most important challenge is the human factor. How to rebuild an agricultural sector while taking into account the sensitivities of the farming community? How to create local support, while at the same time inspiring confidence and enthusiasm within the farming community so it embraces the move towards taking agriculture to a higher, more sustainable level? If the region succeeds with these ambitious plans, it could serve as an example for the whole of Japan.
CHAPTER EIGHT

Safe to eat? Food safety policy and radioactivity in the market place

Gijs Berends

Introduction: radioactive contamination in the food sector

The Fukushima accident triggered one of Japan’s most severe food scares. It caused the release of radioactive material into the environment, which then entered the food chain where it affected numerous food products. Tea plantations hundreds of kilometres away suffered from its dispersion. Contaminated meat has been distributed to or sold in most of Japan’s prefectures – albeit in small quantities. Even in Okinawa, more than 2,000 kilometres away from the stricken power plant, noodles were found to have higher levels of caesium than normal (the soba had been made with water filtered with ashes from Fukushima-sourced wood).

In overseas markets, consumer demand for Japanese food produce plummeted and foreign government measures restricted the import of Japanese foodstuffs. Many countries demanded certification to demonstrate that the product in question was safe. In some cases, such as Taiwan and China, imports from certain Japanese prefectures were suspended across the board. More than 70 countries introduced some kind of control or restrictions on Japanese imports.

Domestic concern was at unprecedented levels too. Some supermarkets, convenience stores and department stores sought to meet

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1. This chapter relies in parts on an article I wrote with Megumi Kobayashi and which was published as ‘Food after Fukushima – Japan’s regulatory response to the radioactive contamination of its food chain’, Food and Drug Law Journal, Vol. 67, No. 1, 2012. I would like to thank Megumi for our collaboration since the Fukushima accident and for her comments which made this a better paper.

2. Mainichi Shimbun, ‘High level of radioactive cesium found in Okinawa noodles’, 13 February 2012.
consumer anxiety by introducing their own labelling standards and at times by showcasing testing certificates. Consumers lost their appetite for products from the afflicted regions, where farmers saw a steep drop in the prices of their goods. Some farmers could no longer find customers for their cattle, but still needed to purchase feed, which brought on financial difficulties. Parents meanwhile sought to ensure that the diet of their children was not detrimental to health and so schools started to screen school lunches.

More than one year later, consumers still regularly checked the origin of products and made purchase decisions based on their own assessment of what could be deemed safe. One obstacle to consumer belief that produce on the market was safe was the difficulty in understanding safety levels. Most people living in Japan gained some proficiency in radiation jargon and would talk about ‘becquerel per kilogram’. But it was less obvious how to interpret these levels when both the government and retailers changed position on what constituted maximum permissible limits of contamination. After the accident, the Ministry of Health, Labour and Welfare (MHLW) introduced what it called ‘provisional levels’ for the maximum contamination that it could allow. Just over a year later, the MHLW established new levels that were up to 20 times stricter than these provisional levels. In parallel, retailers announced that they would not sell food even if contamination levels were well under the levels set by the government. In one case, Meiji, a large food company, withdrew 400,000 cans of infant food even though the levels of caesium it found were at the time six times lower than those deemed acceptable by the government. The resulting variety in applicable levels led to calls from the government for private businesses to refrain from setting independent levels of acceptable contamination so as to not confuse the consumer.3 This was not an easy sell as some consumers were demanding zero tolerance for contamination.

Another obstacle to consumer faith in food safety was the fact that many products were found to be excessively contaminated. From 19 March 2011 until the summer of 2012, around 200,000 tests were conducted that revealed excessive contamination in more than 2,250 samples of foodstuffs.4 In 14 prefectures, around 85 different kinds of

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Figure 8.1: In National Azabu, a supermarket targeting the foreign community in Tokyo, a sign of certification of radiation safety for vegetables, August 2011

Food were found to have been affected. The range of contaminated products was wide: raw milk, tea leaves and seaweed; widely consumed vegetables such as bamboo shoots, cabbages, and wasabi (Japanese horseradish); regular fruits such as kiwi fruits; numerous fish including cherry salmon, rock fish, flounder, and sea bass; and contaminated meat ranging from popular items such as beef to less frequently consumed meat such as boar, deer and bear.

So how did this contamination spread? Shortly following the accident, the first contamination of food was announced after samples of milk were taken from areas close to the Fukushima-Daiichi nuclear power plant in Fukushima Prefecture. In the second weekend after the accident, contaminated spinach was found in Tochigi, Ibaraki, and Gunma Prefectures. From then on, numerous types of vegetables were found with higher-than-permissible levels of radiation. In Fukushima Prefecture for instance, these included such vegetables as broccoli,

6. For all cases of food contamination mentioned in this paragraph, this chapter relies on the test result database held by the MHLW at http://www.mhlw.go.jp/english/topics/2011eq/index.html.
cabbage, rapeseed, turnip and a leafy vegetable called *komatsuna*. An additional worry for households was the Tokyo metropolitan government’s recommendation on 25 March that tap water should no longer be consumed by infants, a move followed by cities in Chiba and Ibaraki Prefectures. These steps were taken after excessive levels of radioactive iodine were detected at purification plants. Consumers in Tokyo swiftly moved to stock up on bottled water and left the shelves in supermarkets and neighbourhood convenience stores empty.

From leafy vegetables, contamination started to be detected in other food items such as shiitake mushrooms, bamboo shoot, ostrich fern, and sand lance, the latter a fish caught off the coast of Fukushima Prefecture and which was found to have caesium levels 25 times the legal consumption limit. By mid-April findings of contaminated food seemed to have decreased and become more restricted to areas in close proximity to the nuclear plant. But on 12 May it was reported that high levels of caesium had been detected in tea in Kanagawa Prefecture, southwest of Tokyo and far removed from Fukushima. This detection caused unease amongst tea planters. This unease was justified because in the days that followed, tea with higher than permissible levels was detected in Fukushima, Tochigi, Gunma, Ibaraki, Chiba, Tokyo and Shizuoka Prefectures.

The contamination continued to spread. On 2 May, Tochigi Prefecture announced that caesium had been detected in grass feed. This made observers worry that contamination may enter the food chain via feed. Indeed, on 8 July excessive levels of caesium were found in beef, which it turned out had come from 11 Fukushima cows. This was the first finding of contamination in meat. And this time the produce had also been sold to consumers, causing apprehension levels amongst officials and consumers alike to rise. In the following weeks, during which consumers sought to find untainted produce and food operators sought to safeguard their reputations, it became clear that this case of contaminated Fukushima cattle was not a one-off. By early August, it had been revealed that contaminated rice straw had been shipped to at


8. The announcement can be found at http://www.pref.tochigi.lg.jp/g06/houdou/boukusoutyousa.html (in Japanese).
least 17 prefectures and that affected cattle had been found in the four prefectures of Fukushima, Iwate, Miyagi and Tochigi.\footnote{For data on cattle fed radioactive rice straw, see \url{http://www.mhlw.go.jp/english/topics/2011eq/dl/beef_other_20111130.pdf}.}

With this beef predicament simmering all summer, concern then turned to the rice sector. If any contamination were to be found, it would strike at the heart of Japanese agriculture, if only because the prefectures of Fukushima, Miyagi and Ibaraki account for 15% of all Japan's rice production. Before and during the September and October harvesting season, no excessive contamination was found. This led to some premature declarations that rice from the prefectures was safe. Unfortunately, in November, post-harvesting tests in Fukushima revealed the first contamination above acceptable limits, which was followed by successive announcements of affected rice from several other farms in the prefecture.

This overview goes to show that consumer knowledge of the spread of contamination depended on the nature of the products (leafy vegetables are usually the first to be detected mostly because they are more liable to provide a contamination trap for radioactive materials as a result of their large surface area), the harvesting season (you cannot monitor if there are no crops), actual monitoring (some products were not monitored from the start) and the food supply chain (as the example of Okinawa noodles shows, contamination can show up a while later in the production process). Even months after the accident, still new parts of the food chain were becoming problematic. By 2012 concerns had moved on to cattle faeces, which are used to fertilise soil; to contaminated worms, which are part of the diet of wild animals; and to the forest industry, which sells or uses trees for growing mushrooms. It is not an easy task to assure consumers when the food sector exhibits such high levels of complexity. The impact on the food sector has been enormous and radiation fears crept into all parts of the food chain. Given this impact, this chapter will consider whether the accident has led to policy change or institutional change. First, it will describe how pre-Fukushima food crises have previously altered policy or institutional settings. The chapter will then analyse the reaction of the authorities after Fukushima and conclude whether this food crisis, too, prompted change.
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Food crises and policy change before Fukushima

It may be fitting to start the discussion of pre-Fukushima food crises with the notorious mercury poisoning accident in Minamata in southwest Japan. After all, both the Fukushima and Minamata accidents were industrial tragedies that led to a release of harmful contamination into the environment which then entered the food chain. In the case of the Minamata accident, methyl mercury was released in industrial wastewater which in turn was discharged into Minamata Bay. The mercury accumulated in fish and its consumption by the local populace resulted in mercury poisoning. The recognition of Minamata disease in 1956, which can in some cases lead to paralysis and death, and the subsequent quest for accountability and compensation by the victims, has been credited as one of the pivotal points in the development of environmental and consumer policy in Japan. The accident led to profound discussions about the role of the government to protect consumers. It drove an analysis of whether the government had been too slow in aiding the afflicted. And a discussion started on whether the government had favoured industrial development over the safety of citizens. The accident also showed that questions of accountability and compensation proved to be a great predicament. Victims at the time faced a scarcity of legal options to seek remedies or compensation and the need to address this dragged on for decades. Some say that these questions were never answered to the satisfaction of all concerned. This goes to show that the debate on compensation and accountability after Fukushima may continue for some time too. In terms of institutional change, the Minamata accident contributed to the establishment of the Environment Agency. Politicians also fought for the adoption of laws to reduce several types of pollution and introduced new pollution controls.10

The outbreak of the BSE crisis was another food crisis that had a profound impact. On 10 September 2001, the first case of BSE was detected in Chiba Prefecture and it propelled a reform of Japan’s food safety system that some considered drastic. BSE is a neurodegenerative disease that can be transmitted to humans through food consumption. Upon the news of the first BSE case, consumption of beef dropped 70%. Consumers refused to buy meat from the area and, for a while, schools

in Chiba took milk off the menu. Numerous firms in the industry went bankrupt and McDonald’s faced a drop of more than 80% in profits.\footnote{See for a good overview of the BSE scandal: Jeff Kingston, \emph{Japan’s Quiet Transformation; Social Change and Civil Society in the Twenty-first Century}, RoutledgeCurzon, 2004.} This crisis and the fragility of consumer trust in government decisions led to the drafting of an entirely new law, the Food Safety Basic Law. One of the most important stipulations of this new piece of legislation was the proposal to separate risk assessment and risk management, the idea being that politics should not influence science. It would therefore be necessary to separate a government’s risk-assessment function from those officials who have to make the decisions on the basis of that risk. In Japan this meant the establishment within the cabinet office of what became the Food Safety Commission (FSC). This was considered a sweeping reform as food safety policy had until then been firmly in the hands of both the MHLW and the Ministry of Agriculture, Forestry and Fisheries (MAFF).

Even if these changes were profound, they were not sufficient to satisfy consumers who were becoming increasingly vocal and increasingly organised. Whereas the post-war consumer movement had been concerned with poverty reduction and consumer lobbies had worried about defective products, food safety and false labelling during the period of post-war industrial growth, in modern times consumers had begun to face an increasingly complex market. Consumer debt, unfair commercial transactions, internet transactions and complicated contracts all contributed to the sense that consumer policy needed to become more sophisticated. In parallel, a decrease in lifetime employment after the collapse of the economic bubble in the early 1990s reduced the loyalty of the employee to his or her company. This fostered a climate in which it was more likely for workers to point out in-house scandals and blow the whistle on the management. Consumers felt that in each new crisis responsibilities amongst ministries remained fragmented and that inter-ministerial disputes lingered. They wanted a place of their own, an assembly place within the government for discontented consumers.

The prime minister at the time, Yasuo Fukuda (in office from September 2007 to September 2008), was receptive to such demands. His willingness to act was cemented by the gyōza (dumpling) food scandal in which some frozen gyōza that had been imported from China in
late 2007/early 2008 were found to contain high levels of the pesticide methamidophos. Consumption of the dumplings caused several people to fall ill and resulted in a massive drop in trust in food coming from China. This plummeting trust prompted *Time* magazine to talk of a ‘dumpling war’.\(^\text{12}\) Even if it later turned out that a disgruntled worker had tampered with the dumplings, the incident happened to come on top of a series of indigenous food safety scandals. These included respected Japanese companies using expired ingredients or manipulating the expiry date or the place of origin on labels. Consumer faith in the food safety system as a consequence was low and consumer anxiety mounted. Indeed, when at the end of 2009 the New York-based advertising agency JWT published an anxiety index amongst various countries, Japan did not only top the index; the survey also showed that the anxiety drivers included food safety and remarkably the ‘quality of products imported from China’.\(^\text{13}\)

This particular mood of the nation gave PM Fukuda the necessary momentum to establish the Consumer Affairs Agency (CAA) within the cabinet office. The agency was given direct jurisdiction over 29 laws regarding labelling, safety and commercial transactions. The CAA has full competence over the labelling of food and consumer goods, a competence that was taken away from the MHLW and MAFF. As for its competence of ‘safety’ one needs to think less of responsibility for the inspection of food on the market (this remains in the hands of the MHLW and to a lesser extent MAFF) but rather as the organisation which, through the collection and analysis of information about harmful events and incidents, can intervene and streamline government reaction to crises. It has the right to recommend legislative action and take up risk communication in times of emergency. But this was still not deemed sufficient by the then opposition Democratic Party of Japan (DPJ). In its manifesto for the 2009 Lower house elections, the DPJ stated that it wanted to ‘establish a Food Safety Agency to unify foodstuff risk management functions that are currently divided’.\(^\text{14}\)

\(^{12}\) ‘Japan, China head off a dumpling war’, http://www.time.com/time/world/article/0,8599,1710742,00.html.

\(^{13}\) *The Daily Yomiuri*, ‘Japan tops 11-nation anxiety index’, 28 November 2009.

\(^{14}\) For an English version of the DPJ manifesto, see http://www.dpj.or.jp/english/manifesto/manifesto2009.pdf.
Finally, and maybe most importantly, one would also need to reflect on the Tokaimura nuclear incident. In September 1999 three employees of a nuclear power plant in Tokaimura, a city in Ibaraki Prefecture, were subject to high doses of radiation whilst they prepared fuel for an experimental reactor. The dose proved fatal for two of the employees. It is said that ‘the accident was caused by bringing together too much uranium enriched to a relatively high level, causing a “criticality” [a limited uncontrolled nuclear chain reaction], which continued intermittently for 20 hours’. Shortly after the incident, neighbourhood farmers were faced with fearful consumers annulling the orders they had placed for a kind of sweet potato, a product for which the region is well known.

As the Japanese authorities could see first-hand that nuclear incidents had a potentially devastating collateral impact, they took action to prepare better for a possible future emergency. First of all, the government adopted in December 1999 the Act on Special Measures Concerning Nuclear Emergency Preparedness, which was meant to ensure that in case of a nuclear accident, the government could swiftly move into action. Its main vehicle, as the law foresees, is the establishment of the ‘Nuclear Emergency Response Headquarters’ run by a director general, normally the prime minister. The law does not much refer to food but Article 20 (3) gives the authority to the director general, when he or she ‘finds it especially necessary for implementing emergency response measures accurately and promptly in the emergency […] area […]’, [to] give necessary instructions to the heads of the relevant designated administrative organs and the heads of the relevant designated local administrative organs […]’. This is a provision that leaves the director general with much discretion and it allows him or her to take food safety measures. A second regulatory follow-up was the revision of the maximum permissible levels of radioactive contamination in food. Provisional levels could already be found in the first guidelines on accident prevention drafted in 1980 by the Nuclear Safety Commission (NSC), a scientific advisory body within the cabinet office. After the Tokaimura predicament, these maximum levels were reviewed. A third

18. Article 20 (3) of Act No. 156 of December 17, 1999.
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...follow-up was that the government started to lay down some guidance on sampling and monitoring in case of radioactive contamination of food. This led to the drafting of the *Manual on Radiation Measurement of Food in Emergency Situations*, which came out in March 2002.19

This overview of food scares that Japanese citizens have faced in recent years goes to show that each of these crises has led to policy or institutional change. The Minamata accident led to the establishment of the Environment Agency and to the adoption of pollution laws. The BSE crisis led to the Food Safety Basic Law and the launch of the FSC. A series of food scandals and consumer complaints, topped by the gyōza incident, led to the creation of the CAA. The Tokaimura incident prompted the drafting of a new nuclear safety law and proposals on how to deal with radioactive contamination of food. Even after so much institution-building, there were politicians, as the 2009 DPJ manifesto reveals, who argued that a new food agency would still be needed to alleviate the fragmentation of the food safety system in Japan. The question then is whether proposals for changes to the food safety system were also made after the Fukushima accident.

**Reaction and Response after Fukushima**

*The regulatory response*

An analysis of policy change would have to start with the regulatory response to the Fukushima accident.20 In a nuclear crisis there are essentially four necessary regulatory steps to safeguard the food chain. First, what should be the maximum permissible levels for contamination of food? Secondly, policy-makers will have to agree how these levels will be controlled. Then a mechanism needs to be put in place to ensure that excessively contaminated food is taken off the market. And finally, if contamination levels go back to acceptable levels, rules should allow for restrictions on these products to be lifted.

Did Japan have a legal framework for these four steps? And was the framework adequate to face a crisis of a magnitude not seen before? We have seen above that in reaction to previous crises, the government adopted the Nuclear Emergency Preparedness Act and the Food Safety

Basic Law. Two other laws are relevant in the government’s response to the radioactive contamination of the food chain: the Food Sanitation Law, which regulates food safety, and the Japan Agriculture Standard Law, which lays down labelling requirements and certification standards. These laws can be called framework legislation in the sense that, in addition to the provisions they stipulate, they allow the government, when necessary, to take ‘implementing decisions’. The laws cannot cover each and every possible food problem and therefore grant discretion to ministers or officials to take swift decisions.

This is how the government set the levels of maximum permissible contamination, the first regulatory step in case of a nuclear accident. Under the Food Sanitation Law, the director general of the MHLW’s food bureau has the authority to sign information notices with which to adopt these levels. Such information notices were issued twice. The MHLW adopted ‘provisional levels’ for the first time just a few days after the accident. As we have seen above, these levels were based on work done by the NSC. And they were amended after the Tokaimura accident. They offered the quickest way to give some legal certainty as to which products would be considered safe and offered guidelines for consumers and food operators who at times tested food with their own testing equipment. These levels were applied on a provisional basis and the idea was that as soon as a proper risk assessment was done, new and more permanent levels could be applied. In the course of the year after the accident, such an assessment was conducted and new levels were adopted in mid-March 2012. They have been in force, with temporary derogations for some product groups, since 1 April 2012. The table below shows the

<table>
<thead>
<tr>
<th>Table 8.1: Maximum permissible levels of caesium</th>
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<tbody>
<tr>
<td><strong>Provisional levels applicable from 17 March 2011</strong></td>
</tr>
<tr>
<td>Category</td>
</tr>
<tr>
<td>Vegetables, grains, meat, eggs, fish</td>
</tr>
<tr>
<td>Drinking water, milk, dairy</td>
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*Source: MHLW*
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two sets of levels for caesium. the new provisions created more detailed food categories and it is also clear that the new levels are much stricter than the provisional levels that were adopted in the direct aftermath of the fukushima accident. the process to establish the new levels as a result proved to be somewhat controversial and this will be discussed in more detail below.

the discussion on how to set the levels for acceptable contamination in food received much attention, particularly from the public. but soon there were calls to also set maximum limits for soil. rice planting in japan usually takes place from late april to late june. if farmers were to plant rice in contaminated soil, one month after the accident, there was a risk that the crop would be affected. maff, which is responsible for the rice production sector, turned to the agricultural environment technical institute, which had studied caesium in brown rice between 1959 and 2001 with the help of samples from 17 locations from all over japan. using this body of knowledge, it was decided to consider a transfer factor of 0.1, which holds that ten per cent of caesium in soil is expected to have been absorbed by the rice at the time of harvesting. in other words, if the maximum permissible level is 500 bq/kg, then the soil for rice may not exceed 5,000 bq/kg. also, maff became involved in setting maximum permissible levels for feed. after all, grass was fed to animals, and livestock could in this way become contaminated. the ministry issued a notice which instructed livestock farmers to use for feed only pasture grass that had been harvested before the nuclear accident and had subsequently been stored indoors. another notice laid down maximum contamination levels for unprocessed feed, such as grass, straw or crops used for feed. less known is that there are also maximum levels for fertiliser, charcoal and mushroom logs.

deciding on guidelines for monitoring and sampling was the second regulatory step. as mentioned above, a manual on radiation measurement had become available in 2002. the government used this manual as the starting point for the guidelines on the monitoring of food contamination that it published on 4 april 2011 and then in the course of

22. maff notice of 14 april 2011, no. 456 (in japanese).
23. maff notice of 1 august 2011, no. 2444.
the crisis revised it twice (on 27 June and on 4 August). The guidelines catalogue which items will have to be inspected and they give instructions on the frequency of the inspection. Inspections are to be carried out ‘on a regular basis’, which is then specified as meaning ‘in principle, about once a week.’ Depending on the food product, these inspections can be become more product-specific.

If the monitoring revealed contamination in excess of the provisional values, the third step for Japan was to make decisions on restricting the product’s distribution or consumption. Restrictions on the marketing of food are normally regulated by the Food Sanitation Act. But the authorities thought that the Nuclear Emergency Preparedness Act was legally a more reliable and powerful instrument. As a result, when the first restrictions were handed down on 21 March the instructions were issued under Article 20 (3) of the Nuclear Emergency Preparedness Act, as described above.

But even if the legislative framework was operational, it was not clear how, in case of contaminated food, one should decide on the size of the area that was to be subject to restrictive measures. The government’s initial reaction was to follow the Japan Agricultural Standard Law. This law implies that for fresh food produced in Japan the prefecture – as the production area – needs to be labelled. The conclusion that the authorities drew from this was that areas subject to restrictions would have to coincide with prefectural boundaries. But stakeholders started to argue that imposing prefectural restrictions was onerous and unnecessarily restrictive. They said that banning food from an entire prefecture would needlessly affect harmless or uncontaminated food. As a result of this thinking, the government decided to change its policy and allowed restrictions to be applied to smaller administrative units, provided they were able to manage the food problem. The judgement on whether

24. The 2002 manual was called *Manual on Radiation Measurement of Food in Emergency Situations*. The 4 April guidelines were called ‘The Handling of Provisional Regulation Values Related to Radioactive Material Present in Food’ (hereafter 4 April Guidelines). The 27 June guidelines were renamed ‘Concepts of Inspection Planning and the Establishment and Cancellation of Items and Areas to which Restrictions of Distribution and/or Consumption of Foods concerned Applies’, (hereafter 27 June Guidelines), which was also the title for the guidelines made public on 4 August (hereafter 4 August Guidelines). They can all be found on the website of the Ministry of Health, Labour and Welfare (http://www.mhlw.go.jp).

25. See 4 April Guidelines, section III.2.
such management was possible was to be at the discretion of the prime minister. Along the lines of this new policy, that same day, restrictions on spinach did not apply to an entire prefecture, but only to two cities and one town.26

Despite the use of the legal framework, voluntary restrictions were also in use. In Shizuoka Prefecture, for instance, contaminated tea was found, but only in a single area in one ward in the city of Shizuoka. Because excessive contamination was limited to a single location, the Food Sanitation Act was deemed sufficient to ensure that these products did not enter the market. To reassure consumers, however, other producers were called upon to voluntarily restrict marketing of their produce. Voluntary measures were more often applied. When Tokyo’s metropolitan government felt that the drinking water was no longer fit for infant consumption, they issued a ‘recommendation’. When the beef crisis broke out, MAFF issued numerous notices asking farmers to take voluntary measures.27 MAFF officials say that in an emergency situation it is common practice for central authorities to request voluntarily actions. Mandatory instructions may take too much time to enact and MAFF officials say they are comfortable relying on farmers’ sense of social responsibility instead.

What kind of conclusions can we draw from Japan’s regulatory response? As it turned out, the legal framework held up in the face of disaster. There was no perceived need for new legislation. When the existing food laws appeared unfit for the exceptional circumstances created by the nuclear accident, then there was the possibility to resort directly to the Nuclear Emergency Preparedness Act, which proved a more flexible and robust instrument. For sure, there was a need for ‘implementing decisions’ under the framework legislation and this was not always straightforward. Disputes arose over how to decide on maximum permissible levels, over the size of the restricted areas, over which law was appropriate to decide on these restrictions and over the

acceptability of voluntary over mandatory restrictions. But this was to be expected in times of crisis.

The institutional response

We have seen that previous crises forced the creation of the Food Safety Commission and of the Consumer Affairs Agency. These institutions were meant to fill deficiencies in the food-safety system that earlier scandals, it was said, had revealed. So were they instrumental in the government’s response to the Fukushima predicament? Let’s look at the FSC first. As we know from the BSE crisis, the Food Safety Basic Law of 2003 allows ministers to ask the FSC for advice. 28 The health minister, Yoko Komiyama, twice made use of this facility. Shortly after the MHLW adopted provisional values for acceptable contamination in food, she asked the FSC for a risk assessment to see whether these provisional values were appropriate. A few weeks after the request, the FSC published its *Emergency Report on Radioactive Nuclides in Foods*. 29 Contrary to expectations, the report did not say too much about the appropriateness of the maximum permissible levels. In fact, the report actually says that it ‘does not discuss [the] adequacy of the provisional regulation values’. It also says that it was written in an urgent fashion and that ‘it should be clearly heeded that this emergency report is not appropriate as a basis for risk management measures under normal circumstances’.

The report of the FSC then was not enough to consolidate the provisional contamination limits. It took a separate letter from the FSC’s chairperson, which said that ‘the on-going safeguarding measures, we believe, are effective enough to ensure the safety of vegetable, seafood and other foodstuffs’. 30 But since the report did not discuss the adequacy of the limits, the minister decided to ask for another risk assessment from the FSC. This is why in October 2011 the FSC came out with a second report, titled *Risk Assessment Report on Radioactive Nuclides in Foods*. This time the FSC concluded that if a consumer faced a lifetime radiation exposure of more than 100 mSv, the risk to health could be

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28. Article 24 item 3 states that ‘related ministers may hear the Commission’s opinions if they are recognised as necessary for formulating policies to ensure food safety’.


30. Letter by Mrs Naoko Koizumi, Message from the Chairperson of FSCJ – on the occasion of completing an emergency report on radioactive nuclides in foods, 8 April 2011.
increased.\textsuperscript{31} In other words, the MHLW had to assure that a consumer would not risk being exposed to more radioactive contamination than recommended by the FSC. This left officials of the MHLW having to do many calculations. Translating lifetime exposure into maximum contamination levels for food depends on a consumer’s age, his or her diet, and whether he or she is living in a prefecture characterised by a high occurrence of contaminated food. Indeed, one would have to make assumptions as to how much of a person’s daily intake could be contaminated. On these questions, the FSC did not offer an opinion. The ministry then decided itself to assume that 50\% of a person’s daily intake could be contaminated, and that for young children the entire intake could be contaminated. On the basis of such assumptions new levels were established and, with some temporary derogations, were applied from 1 April 2012 onwards. It is interesting to see that the FSC played a relatively minor role in the setting of the maximum permissible levels. It published two reports but refrained from joining the debate over which levels would be most appropriate.

How then did the Consumer Affairs Agency act? The CAA set itself three tasks in the wake of the Fukushima accident. It would lend testing equipment to prefectural and municipal governments. It would provide information to consumers. And it would take up the duty of risk communication so that consumers could decide on their own purchasing behaviour. As a result, the agency faced requests for testing devices from 276 municipalities. It updated its website on a daily basis and drafted detailed Q&A documents for the benefit of uncertain consumers. And together with MAFF and the MHLW it organised town-hall meetings. As the sole responsible actor for food labelling, it gained one important additional responsibility. Because the MHLW created a category for infant foods with its own threshold of permissible contamination, the agency was tasked to draft a law on infant labelling so that consumers could find out which products are in fact considered infant food.

Despite its involvement in the food crisis, the CAA chose not to exercise some of the other instruments at its disposal. For one thing, it can recommend that relevant ministries take necessary action. For one thing, it can recommend that relevant ministries take necessary action. It can also suggest the need for new legislation, and it can undertake investigations.

\textsuperscript{31} For a copy of the report, see http://www.fsc.go.jp/english/emerg/abstract_risk_assessment_report.pdf.
These are potentially powerful tools. But they remained by and large untouched. The agency took the view that its remit does not cover risk assessment and it therefore should not take part in the debate on the maximum level of permissible contamination. It also saw the MHLW as having the prime responsibility for food safety and MAFF for farmers. The CAA did conduct a field survey in one case, when contaminated spinach from Chiba had been shipped to retailers despite restrictions that had been imposed on its distribution. But this was a one-off investigation. The agency does not have the resources or local offices to conduct such surveys on a regular basis. The CAA therefore positioned itself modestly.

Finally, what about local governments?\(^{32}\) Although the central government issued guidelines for the monitoring of contaminated food, the actual testing is done by the prefectures. They are responsible for the planning of the inspections, conducting tests and for the reporting of test results to the ministries. The prefectural governments understood that they had a certain discretion in conducting their inspections. The frequency of inspection allows for some flexibility. There is not always an instruction on the number of the samples or on the size of the material to be collected. And the categories of items to be inspected are not exhaustively defined. Given this discretion, prefectural governments reacted differently. Some prefectures wanted to test products to reassure consumers that their products were safe (in the case of beef for instance, local governments started testing cattle before there were specific national instructions); other local officials expressed reluctance at times to test certain products out of fear that their industry would collapse should contamination be found (in one instance, the governor of Shizuoka opposed testing of unrefined, dried tea leaves).

The conclusions that can be drawn from the government’s reaction to the crisis reveal that most of the decisions were made by the prime minister in his function as director general of the Nuclear Emergency Response Headquarters or by the MHLW and MAFF as the responsible ministries for food safety. Both the Food Safety Commission and the Consumer Affairs Agency played important roles but operated within a narrow definition of their remits. What is more, even if there were question marks about whether prefectural and local governments were

\(^{32}\) See Berends and Kobayashi, ‘Food after Fukushima’, p. 58.
adequately performing their testing and monitoring responsibilities, there were no calls for an overhaul of governmental structures. Even the DPJ, as the ruling party, did not feel compelled to revive its 2009 manifesto in which it called for the establishment of a new all-encompassing food-safety agency.

The role of consumer organisations

Consumer movements in Japan have often been considered weaker than consumer associations in European countries or the US where, it is said, consumer rights, such as rights to safety, representation, or redress, are more easily accepted as these concepts are in line with the philosophical and political views on the rights of individuals. In Japan, however, ‘the birth of the post-war consumer movement preceded the entrenchment of such an awareness in society’ and as a result, ‘widespread acceptance of consumer rights materialized slowly, which impeded the development of the organized consumer movement as a powerful force in Japanese politics’.33 One way to overcome this obstacle to consumer power was to encourage consumers ‘to stand up on behalf of their interests and exercise their rights as both consumers and citizens’.

In the wake of the Fukushima accident, there was no lack of consumer-citizens willing to stand up on behalf of their interests. Many local consumers organised themselves and started to do their own food testing. Fukushima mothers mobilised resources to protest against nuclear power and demand safe food. And consumer organisations regularly submitted letters or position papers to the authorities. But how to stand up for interests when these diverge amongst the consumers? Amongst some Fukushima households most affected by the nuclear accident, families were split, not knowing whether to protect the family’s health or the local economy. Should they dispute the food safety recommendations issued by the government or protect the Fukushima food sector that was being heavily undermined by consumers elsewhere in Japan, who, for right or for wrong reasons, no longer purchased food and products from the region?

This division was also reflected amongst the consumer organisations. They all favoured maximum transparency and argued for the protection

of infants. But on the maximum acceptable levels of contamination in food, there were disagreements. The Consumers Union of Japan believed that even the recent, stricter maximum permissible levels were still too high and they told the health minister that ‘contamination by radioactive materials should be as low as possible.’ Together with Shufuren (Japan’s housewives association) it also suggested obligatory labelling of caesium levels. In contrast, the consumers’ cooperative (COOP) from Fukushima argued that the old, provisional levels were safe enough. They did their own analysis of the diet of Fukushima families and concluded that the daily intake of contaminated food was such that there was no need to lower the maximum permissible levels. In a report to the science ministry, COOP Fukushima specifically referred to the need to consider the plight of the farming community and not to damage the reconstruction of the local economy. Similarly, COOP Japan came out with a press release on 29 March 2012 that stated its test results had shown that the daily intake of contaminated food was such that the risk to public health was limited. At one conference, a consumer representative argued that not all consumers were asking for zero-level contamination and that the silent majority, which would have understanding for a science-based approach, remained unheard.

On 20 April 2012, Jiji Press reported on a cabinet office survey that said that only 26% of Japanese citizens were more concerned about food safety than before the Fukushima accident. This figure went up to 34.8% in Tohoku, the most affected region. Surprisingly, the survey’s results revealed that citizens in Tohoku were less concerned than those of Shikoku, a region much further to the southwest of Fukushima Prefecture. If consumer organisations therefore tried to take a responsible road by balancing consumer and producer interests, it still led to head-scratching by some who did not understand why consumers were made responsible to safeguard Tohoku’s private sector. After all, nobody at the time said that consumers ought to support the farmers in Chernobyl, it has been argued.

35. Reported in the Japan Agricultural News of 13 January 2012.
The role of science
As the position of consumer organisations revealed, policy makers face constituents with contradictory demands. They need to protect the health of citizens. But they also need to avoid unnecessarily jeopardising the livelihood of businessmen. Food operators talked about ‘unfounded rumours’ that destroyed their food businesses, whereas parents talked about insufficient government action to protect their children. Some called for the lowest possible standards for acceptable levels of radiation. Others said that not radiation, but rather enforced evacuation was more threatening to health.36

In such a turbulent environment, one solution is to turn to science. As we have seen, the health minister turned to the Food Safety Commission for risk assessments. The FSC delivered scientific advice on lifelong exposure. But this left MHLW officials to make the assessment by themselves of how this translates into food safety levels. An essential assumption that these officials made was that 50% of a person’s intake could be contaminated and in the case of infants, the entire intake could be contaminated. When the MHLW sent its proposals for consultation to the radiation council of the science ministry MEXT, its reaction was one of scepticism. Council members did not feel that the assumption of daily intake contamination was realistic. They argued that the assumptions of daily intake were higher than the actual situation would prescribe. The Yomiuri Shimbun, the largest-circulation newspaper in Japan, then also argued in an editorial that the assumptions did not reflect reality.37 This criticism was supported by research done by Kyoto University, when its researchers, in a joint study with the Asahi Shimbun newspaper, showed that the daily intake of households in Fukushima revealed much lower contamination levels than assumed by the MHLW.38 One member of the radiation council was quoted in the Yomiuri Shimbun as saying ‘I wonder [if the limits were calculated] based on a fictitious scenario.’

Despite the criticism and scientific findings that contradicted the ministry’s assumptions, the MHLW went ahead and adopted much

37. ‘Health ministry should rethink radiation regulatory plan’. For a copy of this editorial, see http://www.yomiuri.co.jp/dy/editorial/T120204003333.htm.
38. The results appeared in the Asahi Shimbun, 19 January 2012.
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Stricter levels. One interesting aspect of the revision was that the health ministry never claimed that the original, provisional levels had been unsafe. But it felt that stricter levels would reinforce the ‘peace of mind’ of consumers. This can be a legitimate ground for policy-making. In fact, there has been a healthy debate in Japan about whether anzen (safety) or anshin (peace of mind) should steer policy. The former is about science and about established parameters. The latter is a subjective condition. It shows that science and policy in times of crisis can still become muddled. This is of course nothing new. After the BSE crisis, Japan’s prefectural governments continued a policy of blanket testing of all cattle, despite scientific advice that the testing of young cows for BSE was of no use.

Conclusions
The Fukushima accident had a huge impact on the food sector and it affected farmers, fishermen, retailers, food processors and consumers. It was one of the biggest food crises ever to hit Japan. Policy-makers tried, at times in vain, to convince consumers that unsafe food would not be available on the market and that by implication food on the shelves of supermarkets would be fit for consumption. On occasion, politicians took drastic action to reassure the public. One MP, Yasuhiro Sonoda, drank water collected from the Fukushima-Daiichi nuclear power plant, and Tokyo’s governor, Shintaro Ishihara, drank tap water from Tokyo. This for some brought back memories of UK agriculture minister John Gummer who publicly fed his young daughter a hamburger to demonstrate that, despite the BSE crisis, beef from the UK was safe. Maybe these were not persuasive actions, as consumer anxiety stayed high.

Yet despite the tremendous impact the crisis had for the food sector, there were essentially no policy changes. No new major food-safety laws have been adopted nor proposed (apart from new labelling legislation for infant food). There were disagreements on many implementing decisions, but the regulatory framework remained untouched. What is more, there have been no institutional changes either. New institutions or agencies have not been established. There has been no reallocation of competences between regional and central government. At the national level, there has been no change in the responsibilities of the ministries and recently established organisations such as the Food Safety Commission or the Consumer Affairs Agency did not take up
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a lead role in the government reaction to the crisis. The role of science was of importance, but as in previous crises, remained just one factor in the decision-making process. Consumer organisations were vocal, but their clout was marred by their inability to agree amongst themselves. The absence of change should not be seen as a lack of political initiative. It should be seen as a sign that the Japanese food safety system is strong and mature. This does not mean that there were no flaws in the implementation or that disputes did no flare up. But why change a system that withstood one of the biggest food crises ever to hit Japan?
CHAPTER NINE

Conclusions

Dominic Al-Badri and Gijs Berends

Crises lead to change. They can create a sense of urgency and an appetite for alternative policies. They can discredit existing practices or herald the arrival of new leaders. They can unleash ideas hitherto unthinkable and they can create unity amongst decision-makers allowing them to push these new ideas through.¹ This does not mean that everything changes though. A crisis may not affect the fundamentals of a particular policy, offering no reason for change. Similarly, some policies are engineered precisely to manage the consequences of a particular crisis. Safety regulations or disaster management rules do not need to change if they have proven valuable and successful in the face of an emergency. How then did the Great East Japan Earthquake affect the archipelago? This book has brought together the policy areas most affected by the events: politics, economic and fiscal policy, energy, climate policy, agriculture, and food safety. Our interest has been to see whether these were the policies most likely to undergo change. To judge this we have asked three questions. What was the impact of the triple disaster on the policy area in question? Have the earthquake, tsunami and nuclear accident caused the adjustment of existing policies? And has systemic change occurred through which new structures or institutions have been established or competences reallocated? In the course of finding answers to these questions the contributors have made observations about the social and societal impact of the tragedy. Although not the subject of this book we also touch upon these issues in the concluding paragraphs.


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What impact did the events of 11 March 2011 have?

Without a doubt, the impact of the earthquake, tsunami and the nuclear accident has been tremendous. As noted in Chapter 3, the crisis was of a proportion and complexity never before experienced by a single nation outside of wartime. It caused engineers, politicians, scientists, citizens of Tohoku, consumers and officials to scramble for information and to struggle to find out what was happening, and why. Simply listing again some of the findings in the chapters of this book suffices to demonstrate the magnitude of the events. Close to 20,000 people died and as many as 468,000 people evacuated their homes. More than a million homes and buildings were damaged. Around 100,000 Self-Defense Force personnel were employed in rescue, relief and reconstruction efforts. Costs for reconstruction may equal 5% of GDP. The number of tourists to the most affected prefectures dropped 70%. All 54 nuclear power plants were taken offline by May 2012. This fed a steep rise in the quantity of LNG imports and as a consequence Japan suffered its first annual

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trade deficit since 1980. Millions of tons of CO₂ have been emitted by thermal power plants that replaced the idle nuclear power plants. No fewer than 28 of Japan’s 47 prefectures saw their agricultural and fisheries sectors affected by the tsunami and by radioactive contamination. Agricultural damage is estimated at ¥2.4 trillion. In the three most afflicted prefectures – Miyagi, Fukushima and Iwate – all ports, save three, were affected, many of them to the point of destruction, and a total of 29,000 fishing vessels were damaged. Food products were found to have higher levels of contamination than usual as far away as Okinawa and more than 200,000 food samples had been subjected to tests by the summer of 2012. Global supply chains and food distribution chains were disrupted. Out of the fear of radiation, consumers expressed doubt about the safety of products from cars to pharmaceuticals. Measuring devices were installed in the port of Yokohama to reassure global clients that their ordered goods were free of contamination. Even the number of marriages and divorces went up as Japanese citizens considered the triple disaster such a momentous occasion that they felt more comfortable making far-reaching decisions. Indeed, the events propelled people to question some of Japan’s long-standing structures. Should there not be a unity government, a government of ‘national salvation’? Should the quasi-monopolies of Japan’s powerful power companies not be dissolved? Should the ‘nuclear village’ not be dissected and its political clout removed? Was this not the time for Japan’s ‘infant civil society’ to seize the moment and to mobilise for a bottom-up transformation of the nation?

Did 11 March cause political and policy change?

Given this impact, it was inevitable that political and policy changes would follow. In political terms, the public standing of a select group of politicians rose greatly. Cabinet ministers such as Goshi Hosono and Yukio Edano emerged from the crisis with their reputations enhanced. In addition, Prime Minister Naoto Kan, against the odds, prolonged his political career and bartered his resignation for the approval of some far-reaching legislation. Widespread disillusionment with the performance of national politics as a whole in the aftermath of the earthquake also opened up space for a new regional leader to garner national attention. Osaka Mayor Toru Hashimoto became one of the most talked-about

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politicians in the country, whilst other popular local politicians also benefitted from the pervasive popular discontent with mainstream politics. Bipartisanship in the face of tragedy was short-lived, but opposition parties backed government policy on Tohoku and renewable energy, and legislation relating to reconstruction and supplementary budgets was adopted in spite of a politically divided Diet.

Economically, Prime Minister Yoshihiko Noda succeeded not only in introducing temporary tax hikes to fund the costs of reconstruction, but he also claimed a substantial political victory in the summer of 2012 when the Diet adopted legislation that would permit a long-awaited consumption tax increase. For a decade and a half, successive prime ministers considered this policy either politically suicidal or practically unachievable, even if many considered a tax increase necessary and inevitable. As is argued in the chapter on economic and fiscal policy, PM Noda was able to benefit from Japanese sentiment that the costs of reconstruction should not be placed on the shoulders of future generations. This outburst of solidarity may have paved the way for consumers to also accept the necessity of a tax increase, which accordingly made it politically palatable.

Undoubtedly, the energy sector has emerged from the events facing the largest number of policy changes. The countdown towards May 2012 when the last nuclear power plant was taken off the grid proved to be an extraordinary episode. It squared off nuclear safety against industrial competitiveness, local authorities against national government, and energy conservation against possible black-outs. Some reactors were restarted, but at the price of a growing anti-nuclear civil movement that has gradually grown in strength. Japan’s strategic energy plan of 2010 – which foresaw that nuclear would constitute 50% of Japan’s power generation by 2030 – did not survive the Fukushima accident. A new strategy published in September 2012 aimed for the ‘realization of a society not dependent on nuclear power’ and undertook to ‘mobilise all possible policy resources to such a level as to even enable zero operation of nuclear power plants in the 2030s’.

The new strategy also foresees around 30% of Japan’s needs to come from renewables which means that a rapid expansion of renewable technologies will be necessary. This

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explains why Japan adopted the world’s most generous feed-in tariff (FIT) rates. The FIT scheme requires utilities to purchase all available renewable energy, such as solar, wind, geothermal, hydro and biomass, from all types of suppliers. Business opportunities now abound and as one solar businessman said of his competitors: ‘Everyone is coming to Japan.’ An unambiguous decision to phase out nuclear has however not been taken. Nuclear power will remain part of the energy mix for the years to come under any scenario, and nuclear safety rules will thus be paramount. Following 11 March 2011, Japan has introduced two-stage stress tests and the new Nuclear Regulation Authority (NRA) is expected to announce more safety regulations shortly after its inception.

In terms of climate change, the nuclear accident marred Japan’s strategy to move to a low-carbon society. Limited nuclear power meant that CO$_2$-emitting thermal power plants and back-up generators had to fill the void. In the next few years Japan’s CO$_2$ emissions will therefore rise or at best decrease less than foreseen. This has made Japan’s emission reduction target of 25% – by 2020 compared with 1990 – untenable. According to the influential Energy and Environment Council, a reduction target of such ambition will not be met before 2030. One could therefore draw the conclusion that Fukushima essentially delayed Japan’s low-carbon policy by ten years. The government did adopt a little-noticed environment tax, which is anticipated to generate revenue that can help put in practice emission reducing measures. But in this, the principled, moral tone that underpinned the climate policy of the Democratic Party of Japan (DPJ) under Prime Minister Yukio Hatoyama has disappeared. Decisions are made on the basis of what Japan economically and financially can afford, not on the basis of what is needed to tackle global warming.

Agriculture was hit hard by the tsunami and the release of radioactive materials, and this has rendered reform more urgent. Reports written after the disaster have encouraged the expansion of farm size, the use of land for energy production or for rural tourism, and the creation of high added-value by integrating various industries that move food ‘from farm to fork.’ In Miyagi Prefecture, such new agriculture is being developed in the wake of the disaster. Local authorities and a consortium of companies are together developing the Sendai plain into an area for large-scale agriculture and intensive greenhouse horticulture. Industries and farmers are working to make solar-generation facilities and biomass boilers
an integral part of the new farming. If successful, Tohoku agriculture could become an example for the rest of Japan.

In terms of food policy, a regulatory framework to deal with the contamination of the food chain was in place and it held up in the face of disaster. But Japanese authorities jostled amongst themselves to draft rules on the maximum permissible levels of radioactive contamination in food. In a much-followed regulatory modification, the Japanese government decided little more than one year after the first detection of radioactive contamination in food to introduce levels that were ten to 20 times stricter than previously applied measures. Less known is that the authorities also had to draft maximum levels for soil, for feed, for fertiliser and for charcoal and mushroom logs, all part of an increasingly complex food chain.

Did 11 March cause systemic change?

If policy changes were plentiful, it is less clear whether the Great East Japan Earthquake has also brought about systemic changes. Have new structures or institutions been established, competences been reallocated or structures been dismantled? Arguably, the most influential systemic change is likely to be in the energy sector. The Fukushima-Daiichi disaster led many people to voice their opposition to a sector that had held onto its privileged position by virtue of regional monopolies. Many now argue that these monopolies ought to be taken apart. As liberalisation in several Western countries has shown, an unbundling of generation and transmission of power can lead to lower prices for consumers. Also, increasing the share of renewable energy would require a smarter and more flexible grid. As is asserted in the energy chapter, electricity market reform could therefore turn out to be the most significant consequence of the accident. It is too early to tell where this reform will lead, but if the Fukushima accident – and the painful revelation that western Japan cannot supply eastern Japan (or vice versa) with power – is unable to convince stakeholders that change is indispensable, then one would have to be pessimistic about whether reform will ever occur.

More advanced is the establishment of two new agencies: the Reconstruction Agency and the aforementioned NRA. Many observers blamed the accident on the absence of an independent safety regulator, and thus the NRA will, to many, be a welcome addition to Japan’s
institutional landscape. It cements the separation between the regulator and the promoter of nuclear power, something that was lacking before the Fukushima accident. The NRA will have a large degree of autonomy and is in this way often compared with Japan’s Fair Trade Commission. Interestingly, to avoid any appearance of collusion or the formation of too cosy a network, a ‘no-return’ rule has been imposed that precludes officials who join the regulator from returning to industry. In a country notorious for its practices of amakudari (literally ‘descent from heaven’), whereby senior bureaucrats take up high-ranking positions in the public or private sector, this has been a significant modification. The Reconstruction Agency has been established to oversee the efforts to rebuild Tohoku, but it is arguably harder to qualify this as systemic change. After all, by definition, the agency is to have a temporary character as reconstruction efforts are not expected to go on forever.

**Despite the changes, much has stayed the same**

The Great East Japan Earthquake has led to many policy adjustments and to a few systemic changes. But the findings of the contributors to this book show that much has remained unaffected. Politically speaking, the window of bipartisanship had closed within about a month of 11 March 2011. The continued political bickering in the face of disaster sustained a widespread discontent with national politics. The likelihood of a government of ‘national salvation’ quickly faded and the chances of a genuine two-party system were compounded by the prolongation of a situation wherein the ruling party has no majority in the Upper House. What is more, Japan’s long-term foreign-policy challenges remain unchanged. In the aftermath of the earthquake, assistance by near neighbours such as China, South Korea and Russia generated goodwill in Japan, and American support has undeniably fortified the bilateral security alliance between Japan and the US thanks to the latter’s ‘Operation Tomodachi’. But at a more existential level, disputes over contested territories and concerns about the regional balance of power continue to determine foreign policy.

In economic terms, the events of 11 March did not lead to an ‘economic rebirth’. There has been no obvious policy change related to Japan’s industrial structure or economic governance. The disruption of supply chains turned into a global predicament, but many companies
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fixed the problems before the end of the year. The decrease in GDP was less than some feared and paled into comparison with the loss at the time of the 2008 ‘Lehman shock’. Japan faced a rare annual trade deficit, but according to estimates the trade balance will tip into Japan’s favour by late 2013. As is argued in the chapter on economic policy, contrary to popular perception, statistics have shown no new evidence of the hollowing-out of Japan’s manufacturing base. Maybe most importantly, despite the adoption of the consumption tax increase, negative pressure on Japan’s credit rating may remain.

In another sign that much is unchanged, Japan’s policy toolbox to reduce greenhouse gasses has by and large been untouched. The DPJ, before the Fukushima accident, tried to introduce carbon pricing. A draft law called for emissions trading and carbon taxation but this ambition had already faltered before the Great East Japan Earthquake. After 11 March, few politicians have been willing to push for emissions trading or a higher environment tax. In the end, the DPJ resorted to the same policy instruments as previous Liberal Democratic Party-led administrations: subsidies, modest legislation and voluntary measures.

Agricultural liberalisation is a controversial and tangled matter. One school of thought holds that agriculture has held the economy hostage as it constitutes a stumbling block for ambitious trade agreements with major trading partners. But others argue that liberalisation will mortally wound a sector that is already a fragile one. It is said that being part of an ambitious trading block like the Trans-Pacific Partnership (TPP) could add ¥10 trillion to Japan’s GDP. But joining the TPP could also lead to a ¥4.1 trillion loss in agricultural production, according to officials in the agricultural ministry. What should decision-makers then do? Before Fukushima, PM Kan favoured joining the TPP. After Fukushima, PM Noda held the same opinion. This means that a very opinionated farming community did not succeed in swaying the DPJ away from free trade, even if the damage and destruction to the agricultural sector strengthened the narrative that farming should be revitalised rather than liberalised. Several of the emerging regional political forces, which are notably urban in nature, have also come out in favour of the TPP.

Finally, there has been no legislative or institutional overhaul in Japan’s food safety system. This absence of change has been somewhat atypical. As tradition goes, previous food crises (such as Minamata, BSE
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and the gyōza scandal) have each led to genuine institutional and regulatory modifications. Past food scares have propelled the establishment of the Food Safety Commission and the Consumer Affairs Agency or to the adoption of far-reaching legislation. But what has debatably been the largest food crisis of all has so far led to only limited regulatory change and no organisational restructuring, possibly because the safety system was judged to have functioned satisfactorily.

Citizens’ attitude, civic activism and social responsibility

April in Japan sees the flowering of the cherry blossom, which is also a time when friends and office colleagues get together under the blossom for light-hearted picnics, often with a fair amount of drink, in a practice known as hanami. In April 2011, however, the Tokyo metropolitan government called for would-be revellers to practice jishuku (voluntary self-restraint) and refrain from holding their get-togethers at the usual scenic spots around the capital. Although many understood the reasoning behind this – to show solidarity with the victims of the 11 March disasters – there was nonetheless a fair amount of criticism that the move was excessively heavy-handed, and that there might be negative economic consequences if people nationwide followed suit and reined in their hanami activities. This example goes to show that the tragedy has had at times a significant societal impact. As mentioned in the preface, this book is about ‘hard’ policy areas rather than about wider changes within Japanese society. But findings in this book’s chapters confirm that voluntary restraint and feeling a shared sense of responsibility became an essential part of Japan’s response to the triple disaster.

For one thing, the importance of jishuku raised its head in the midst of the food crisis. As the chapter on food and consumer policy shows, at the time when the radioactive contamination of beef was revealed, farmers were asked to voluntarily refrain from grazing cattle, from distributing and using feed crop planted after the accident and from using rice straw. These requests were all made in view of potential contamination of livestock through feed. Although this may have been unimaginable in other countries, Japanese officials were comfortable relying on a

4. Suggested further reading includes the excellent Japan Focus website (http://www.japanfocus.org), and numerous chapters within McKinsey & Company (eds), Reimagining Japan, (VIZ Media, 2011), and Jeff Kingston (ed.), Natural Disaster and Nuclear Crisis in Japan: Response and Recovery after Japan’s 3/11, Routledge, 2012.
farmer’s sense of social responsibility instead of legally binding rules or regulations.

Voluntary measures have also been key to Japan’s efforts to reduce greenhouse gas emissions. The Japanese private sector faces few mandatory targets to reduce emissions. In return for a relaxed regulatory framework, Keidanren and its members live by a self-imposed voluntary action plan. The industries that have participated in this plan have indeed reduced their emissions and many businesses therefore point out that corporate social responsibility (CSR) works. At the same time, such measures seem inadequate in transport and construction, two major CO₂ discharging sectors that have not been successful in reducing their carbon footprints. This is also why legislation to mandate energy-efficient construction has been identified in this book’s energy chapter as a promising avenue for energy conservation. But as the tradition of climate policy has it, novel voluntary measures, and particularly updated CSR-action plans from Keidanren members, can be expected as soon as it becomes clear whether the new government’s emission reduction target will be legally binding.

Social responsibility was also crucial when the government imposed voluntary energy conservation targets in the summers of 2011 and 2012. Not only did many Japanese feel that it was their civic duty to reduce consumption but, more profoundly, workers accepted to work at weekends so as to help with the management of peak demand, even if this infringed on their family life. This sense of solidarity also explains why politicians were more comfortable than before in adopting a consumption tax increase as they felt that consumers would not punish them for alleviating the burden of future generations.

In a similar vein, the crisis that followed the earthquake did not lead to a rise in political extremism. There were no riots or civil unrest and extreme left-wing or right-wing parties have so far not emerged. But if unrest was absent, civil society has been active and has operated in areas not covered by disaster management policies, such as the neighbourhood groups (chōnaikai) that took it upon themselves to implement training and procedures after seeing the inadequate response to the 1995 Great Hanshin Earthquake (centred on the central city of Kobe). And just as volunteers arrived from all over the country to assist in many different capacities those affected by the 1995 earthquake so too did
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many people head to the Tohoku region to see how they could help following the events of 11 March 2011.5

But civil society was not concerned solely with volunteerism and post-disaster assistance. Consumer organisations may have disagreed over the degree of food safety that one ought to demand or the degree of risk that one ought to accept but they were vocal in expressing what they wanted. Fukushima mothers have become well known for their fight in protecting the health of their families and for their calls to abandon nuclear power. In the foreign press, they were heralded as the green shoots of a new and emerging civil society that would take consumers and NGOs out of the margins of decision-making. That assessment somehow managed to seem both patronising and premature, but it is true that the movement against nuclear power has become more meaningful. Demonstrations across the country have been frequent. And even if it took 16 months for the protest movement to gather steam, a demonstration of un-Japanese proportions (estimates vary between 70,000 and 170,000) was held in Tokyo in July 2012. Conservative and mainstream commentators have tried to portray the anti-nuclear protesters as activists or the ‘usual suspects’, but the July 2012 demonstrations invalidated that, given the participation of many ordinary citizens and the high-profile involvement of respected cultural icons.

If these examples of solidarity, responsibility and rising civic involvement offered ample reason to praise Japanese culture and conscientiousness, Kiyoshi Kurokawa, the chairman of the Fukushima nuclear accident independent investigation commission, threw cold water on these warm sentiments. He wrote of the Fukushima accident in the report of the parliamentary inquiry which he headed that ‘its fundamental causes are to be found in the ingrained conventions of Japanese culture: our reflexive obedience; our reluctance to question authority; our devo-

tion to sticking with the program; our groupism; and our insularity’\textsuperscript{6}. Interestingly, international observers took issue with this characterisation. Not only did they consider it a copout and a cliché, but some worried that if the assigned blame was just a question of ‘culture,’ then other countries could be forgiven for thinking that a similar nuclear accident would not occur within their borders.\textsuperscript{7}

**New fault lines in Japanese politics?**

The triple disaster has had an enormous impact on Japan. As a consequence, instances of political and policy change are numerous and this book has identified a few examples of systemic change. But much also remains unchanged. Shortly after the Fukushima accident there was a belief that Japan would no longer be the same. Commentators went as far as proclaiming a ‘third opening’ of Japan (following the late 19th-century Meiji Restoration and the American occupation after World War II) by arguing that ‘the Fukushima disaster has shaken the foundations of our system as it has proven all of its fundamental assumptions false.’\textsuperscript{8} We offer a more nuanced and complicated picture. Naturally, nowhere was change as evident as in the energy sector.\textsuperscript{9} The Fukushima accident created a sense of urgency and a strong appetite for alternative policies. Existing practices (regional monopolies, safety regulations, inability to transfer power from one part of Japan to another) were discredited. New leaders were called for (TEPCO’s leadership has been replaced) and new ideas unleashed (reform of the electricity market). Policies that until the crisis hit seemed distant gained currency in the energy sector and also in other policy areas (tax increases, FITs). But policies also changed because they were simply politically or practically no longer feasible (the energy mix, the 25%-emission reduction target). A number

\textsuperscript{6} Kiyoshi Kurokawa, ‘Message from the Chairman,’ *The official report of the Fukushima Nuclear Accident Independent Investigation Commission*, The National Diet of Japan.

\textsuperscript{7} Foreign Policy, ‘Is it a copout to blame Japanese culture for the Fukushima disaster?’, 9 July 2012.


\textsuperscript{9} One author has referred to change in the energy sector as a ‘subsystem collapse.’ Paul J. Scalise. ‘Hard choices: Japan’s post-Fukushima energy policy in the 21st century,’ in Jeff Kingston (ed.), *Natural Disaster and Nuclear Crisis in Japan: Response and Recovery after Japan’s 3/11*, Routledge, 2012.
of policy areas stayed relatively untouched. This was because the existing regulatory framework was engineered precisely to manage crises and it did so successfully enough (the food safety system) or because the triple disaster simply did not alter the foundations of the existing policy choices (agricultural liberalisation, economic and industrial policy, and the rejection of carbon pricing).

What emerges then is a mixed picture of both changed and unaltered policies. But this new mix was combustible enough to open up new fault lines in Japanese politics. The departure of Ichiro Ozawa, a dominant force in Japanese politics for decades, from the DPJ bears testimony to this, as does the return to the national political stage of the former Tokyo governor, Shintaro Ishihara, and the emergence of the popular Osaka mayor, Toru Hashimoto, as one of Ishihara’s key allies. While Ozawa’s new party’s platform is anti-TPP, in disagreement with the tax increases and opposed to the restart of nuclear reactors, Ishihara and Hashimoto announced their party backed the tax increases while taking a more ambiguous stance on both the TPP and nuclear energy. Clearly, the issues of nuclear safety, energy policy, trade liberalisation, and taxation constitute a matrix of wedges that will split the electorate in new ways and, irrespective of which party is in power, influence political debate for the decade to come.
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