

Sweden and its Ambition for Sustainable Future^{*}

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スウェーデンにおける持続可能な社会形成への野心的取り組み

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Sweden is well-known for its efforts in attaining sustainability. Several important factors have been historically generated: high-level of civic awareness toward nature; collaborative decision making enabled by neo-corporatism; active role played by the state; and local autonomy under decentralization. Växjö, located in southern Sweden, is famous as “the greenest city in Europe,” as it declared to be fossil fuel free by 2030. Although there are various reasons for success, the remarkable achievement of Växjö demonstrates that top-down national policies such as investment subsidies and bottom-up initiatives formed a coherent platform upon which such results have been made possible. While the current transition of Sweden to sustainable society presents some elements of ecological modernization, it can also be considered as an example of much more profound shift to the green state where deliberative democracy is practiced as a norm. Thus, further research is needed to determine whether such radical transformation can take roots in Sweden.

スウェーデンは、環境対策先進国として知られている。歴史的いきさつから幾つもの要因が重なったためであろう。国民の環境意識が高いこと、ネオコーポラティズム（新協調主義）による意思決定、国家の積極的な役割、進んだ地方分権、はいずれも重要である。スウェーデンの中でも、南部に位置するベクショーは2030年までに化石燃料から完全に脱却する都市となるとの目標を宣言し、ヨーロッパの中で最も環境に優しい都市との評判もある。その成功の原因は幾つもあるが、中央からの補助金など国の政策と地方自治がうまくかみ合ったことが、大きく影響したと考えられる。スウェーデンの持続可能な社会形成への取り組みは、既存の政治経済体制を温存するエコロジック近代化の側面もあるが、それより一歩進んで、緑の国家が理想とする新しいタイプの討議的民主主義へ移行しつつあると見ることもできよう。その意味で今後の動向が注目される。

1 Introduction

Environment has now become one of the most critical concerns in our time. Modern civilization has undoubtedly brought enormous prosperity for many of the humanity. Yet, it has also caused serious damage to our mother planet, on which our civilization bases. Since the latter half of the twentieth century, there have been many attempts for harmonizing economic prosperity with healthy ecological systems. Sustainable development (SD) is one of such key concepts in attempting to ensure that our current prosperity will not hamper any similar human flourishing in the future, as advocated by the famous report of the Brundtland Commission (WCED 1987). Thus, attaining sustainable society is now one of the major goals of human beings as a whole.¹⁾

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This article focuses on Sweden. Sweden is often cited as one of the most successful countries in attaining sustainability. Robyn Eckersley, Australian scholar and an advocate of a theory of the green state, considers Sweden as a nation closest to her normative ideal ; where deliberative democracy (a type of democracy particularly considered relevant for sustainable society) constitutes a key principle in organizing society (Eckersley 2004 ; Eckersley 2006). It is assumed that broad participation by diverse actors including public and private entities in collective decision-making will result in both more politically legitimate and environmentally effective policy outcomes (Bäckstrand et al. 2010 b : 4). The notion of the green state radically differs from mainstream understanding such as ecological modernization (Mol et al. 2009). While the latter rests on an assumption that sustainable society can be achieved by maintaining the current overall framework of political system (liberal democracy) and economic system (capitalism), the green state theory asserts that a fundamental shift away from current political and economic systems are needed (Eckersley 2004 ; Eckersley 2006 ; Dryzek 2013). The ways in which politics and economics are organized in Sweden, according to Eckersley and other theorists, resemble deliberative democracy and neo-corporatist economic policy making.

It is also worth mentioning that Sweden adopts ambitious goals in relation to climate change (Sweden Commission on Climate and Vulnerability 2007). In fact, in the Kyoto Protocol arrangement, Sweden opted for *more* of the CO₂ emission reduction than what was required. This Swedish stance is unique ; many other countries are apparently hesitant to tackle environmental issues squarely as implementing tough environmental policies are costly, and many of them still believe that such burdensome measures would damage economic prosperity. As a result, many countries prefer to “free ride” on such critical issues as climate change. In fact, as we shall see in this article, Sweden is one of the few countries, if not the only one, that has convincingly demonstrated that decreasing CO₂ emission can attain *more* economic prosperity. It is therefore enormously useful to understand why Sweden has made such a reputable success while other countries are still either vehemently oppose or unwillingly concede to embrace policy measures toward sustainability.

In addition, this article especially focuses on the role of sub-national governments (Larsen et al. 2011). Because climate change is obviously a global issue, it is undeniable that global cooperation by all the major nations is of utmost importance. However, as the current negotiation processes of the post-Kyoto Protocol attest, such international negotiations face a deadly standstill. Selfish interests of many key nations do not easily converge, partly complicated by the increasing diversity within both developed and developing countries, and global decision-making processes are coming to be more and more complex without coherent governing structures and/or clear leadership.

In this kind of situation, many local governments in the world have initiated innovative approaches to reduce CO₂ emissions and make their cities “denser, greener and fairer for local residents : ”²⁾ envisioned future cities would be compact by containing urban sprawl, environmentally friendly, and socially just for all groups. This kind of initiatives holds a key for attaining sustainability. The cities in the world are key centers of economic activities and thus constitute a major emitter of CO₂. Thus, turning cities into more environmentally sound places can make a major contribution toward sustainability. Also, it is at the local

level where deliberation, often considered necessary for well-informed environmental decision making, can be more readily fostered (Eckersley 2004). It is encouraging that there are several networking initiatives of like-minded local governments around the world in order to realize their green objectives.³⁾

This article pays a particular attention to Växjö, a relatively small city in southern Sweden. Växjö has been engaged on a series of energy and environmental agendas particularly since the 1970s. Växjö now claims that it is the greenest city in Europe as it wants to be fossil fuel free by 2030. There are many visitors to Växjö year after year to learn how this small city has made such a remarkable shift to sustainability. Indeed, the lessons from Växjö are interesting. Its success was made possible by several key factors. While the national government of Sweden implemented a series of environmental policies often ahead of other countries, these top-down policies are well-matched by locally-driven initiatives. The importance of sustainability has now been mainstreamed in Växjö, and it is considered that even with possible change of local political leadership in the future, this city will most likely to continue pursuing its goal to achieve the greenest city in Europe.

The success of Växjö, on the other hand, demonstrates that not all local governments in Sweden are equally successful. Some of the very small local governments cannot follow the example of Växjö even if they may wish to do so. This kind of limitation is important for us ; many of the key factors behind the impressive success are historically generated and context specific. The mere imitation of Växjö would not likely to promise comparable achievement. For successful emulation of Växjö, other local governments need to learn not only renewable energy technologies but also how consensus building and collective decision making toward sustainability can be made possible.

Based on the experiences of Växjö in particular and Sweden in general, I would conclude that even though deliberative democracy has not firmly set in even in Växjö or Sweden, reforms introduced there do present some chances for changing dynamics politically, economically, socially as well as ecologically, as the nation appears to be far ahead of other countries to foster this type of democracy much needed for the green state. Sweden therefore appears to be in an interesting transition from ecological modernization to something which might be radically different from the current political and economic systems.

2 Major Events and Policies in Promoting Environment and Sustainability in Sweden

Sweden has a long history of environmental concerns.⁴⁾ In 1967 Sweden established its Environmental Protection Agency, which was the first in the world. The Environmental Protection Act of 1969 was “the most encompassing environmental legislation in the world at that time” (Granberg and Elander 2007 : 539). In 1972 the first United Nations Conference on the Human Environment took place in Stockholm, which contributed to reaffirm the awareness that environment constitutes an important political agenda in Sweden. The oil crises in the 1970s raised the interest among the public about energy security. With the Municipal Energy Planning Act of 1977, many local governments started to reduce energy consumptions mainly by improving energy efficiency and introducing district heating facilities.⁵⁾ It is reported that the CO₂ emission was reduced by 40% between 1970 and 1990 (Granberg and Elander 2007 : 539).

In the 1970s and 1980s, environmental taxes on waste and transport were introduced in order to fur-

ther reduce oil imports. In April 1986, in Chernobyl, Ukraine, which was a part of the Soviet Union, a catastrophic nuclear disaster occurred. Then, in 1987 two comprehensive environmental bills were introduced. Although the administrative and regulatory agencies of the state remained the main focus, the bills were intended to change the nature of intervention from remedy to prevention of environmental hazards. These bills were also intended to bring more policy integration by overcoming the compartmentalization of administrative bodies (Hildingsson 2010). It may also worth mentioning that in 1988 some members of the Green Party have won seats at the national parliament.

In 1991 CO₂ tax was introduced in Sweden relatively earlier than most other countries. In 1992 United Nations Conference on Environment and Development (UNCED) was convened in Rio de Janeiro, and one of the important outcomes of this UNCED was Local Agenda 21. Sweden was one of the pioneering countries to support implementing the Local Agenda 21 by encouraging citizen participation for sustainable development.⁶⁾ In 1996 Mr. Göran Persson, the leader of the Social Democratic Party, became the Prime Minister, and in the next year made a symbolic appeal of “Greening the People’s Home ;” the conventional welfare state now needs to be more environmentally friendly. Persson stated that “[our party] once built the People’s Home in broad consensus on the condition for production, increased standard for living, and security for everyone. Now, we have a similar mission. We will realize the vision of a green welfare state” (Persson’s statement being quoted in Lundqvist 2004 : 2). Then the government introduced a new strategy of “Ecologically Sustainable Sweden” (Hildingsson 2010).

The national government was aware that in order to realize sustainable Sweden, local governments hold key positions. In order to assist the local governments to follow national initiatives, large-scale subsidies were introduced. The initial one was called Local Investment Programme (LIP), and local governments apply for the grants for project purposes, and well-performers subsequently receive promised grants. The LIP was implemented during 1998–2002, and was subsequently replaced by a similar yet more climate-focused Climate Investment Programme (KLIMP) administered during 2003–2008.

In 2001 the national government adopted Swedish Climate Strategy. While Sweden was allowed to increase its greenhouse gas (GHG) emission by 4% under the Kyoto Protocol, the government decided to reduce it by 4% between 2008 and 2012 compared to the level of 1990, with the intention to declare explicitly that “Sweden is a pioneer in the field of climate policy” (Granberg and Elander 2007 : 540). In preparing for the 2002 World Summit on Sustainable Development in Johannesburg, South Africa, the government presented the first national strategy for sustainable development. In 2003, the Swedish Strategy for Sustainable Development : Economic, Social and Environmental was adopted (Ahlberg 2009).

In 2006 there was a government turnover due to the election results. The new conservative government started to introduce more market-based policies. Yet, the environmental agenda has by now attained a firm status within the Swedish politics. Even if there may still be technical differences of how to achieve sustainability, there seem to be a broad consensus among political parties that sustainable development is not something that Sweden will abandon even if the government may change due to electoral turnover.⁷⁾

According to Roger Hildingsson (2010), a researcher at Lund University, the Sweden’s historical experience can be divided into four phases (Table 1). Phase 1 (1987–1992) is a period when some of the en-

Table 1 Four Main Phases of Sustainability Governance in Sweden

Phase	Main feature of phase	Main rationality and mode of governance	'Deliberative approach'
1987–1992	Anticipatory pollution prevention control.	Administrative Policy integration ('sector responsibility')	Corporatist inclusion of key societal interests
1992–1997	'Eco-cycle society' and Local Agenda 21	Deliberative: Local implementation of Eco-cycle society'-Administrative: legislative reforms (e.g. 'eco-cycle producer responsibility', new forestry act, etc) Economic: carbon tax, etc	Stakeholder involvement, cooperative arrangements (primarily at local level).
1997–2006	Ecologically Sustainable Sweden	Administrative: Steering-by-environmental-objectives; Green constitutional reform; Biodiversity protection; etc Economic: Eco-tax and LIP reforms; etc	Improved state reflexivity, but limited inclusion of key societal interests
2006–	Climate change policy	Economic: market-based policies (e.g. carbon pricing); R & D and industrial policy	Cooperative arrangements, but limited inclusion of key societal interests

Source : Hildingsson 2010 : 150

vironmental control measures were introduced. The state administration was the main vehicle of implementation,⁸⁾ and this was the time that transition from reactive to proactive measures were articulated, although the realization of such would have to wait for some time. The second phase, between 1992 and 1997, centers around the Local Agenda 21 being introduced by the UNCED in Rio. Its central theme was stakeholder and citizen participation, even though some may still criticize that citizen participation remained rather shallow and rhetorical rather than real (Feichtinger and Pregernig 2005). The third phase of 1997–2006 is distinctive by then the Social Democrat Government's attempt in introducing "Ecological Sustainable Sweden" by trying to reconcile more traditional welfare state objectives with a new requirement for environmental considerations. The measures such and LIP and other reforms contributed more to policy reorientation and outputs rather than making processes more deliberative. Nonetheless, "[T]aken together, state governance has thus been transformed towards enhanced reflexivity" (Hildingsson 2010 : 157). The final phase, from 2006 to present, is the period after the change of the government due to the electoral turnover. The current government appears less holistic and coherent in its understanding of sustainability, and seems to emphasize neo-liberal and market-based approaches. However, it would probably safe to say that sustainability agenda still constitutes a fundamental concern within Swedish politics.⁹⁾

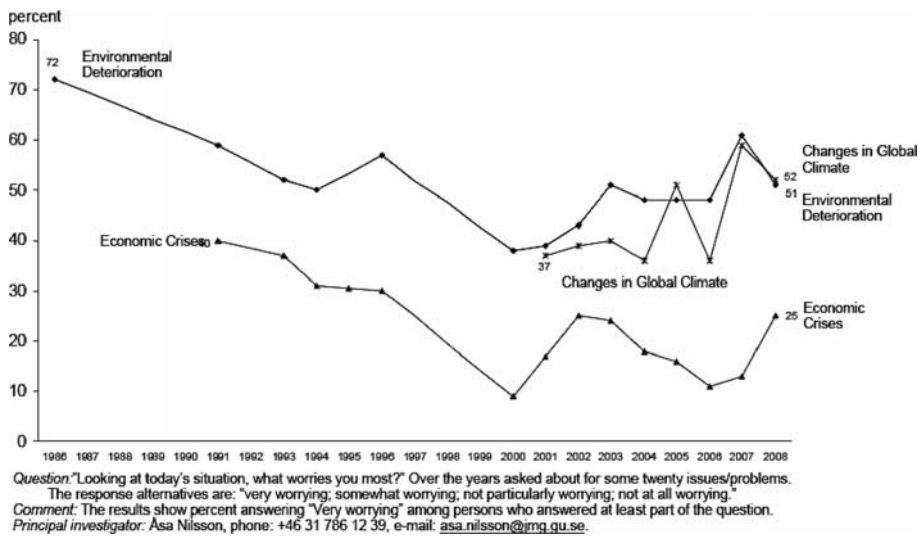
3 Reasons for Sweden's Success

There is no doubt that the success of Sweden is made possible by multiple factors, which are mutually reinforcing. The following are some of the compelling reasons.

3–1 *Very high level of awareness about environment*

It is very common for Swedes to enjoy summer vacation being surrounded by natural settings. Many spend significant amount of their time in their summer house for a considerable period of time. It is also increasingly becoming common that pre-school children spend considerable amount of time in parks and forests, and their early exposure to nature helps contribute to raise their awareness to and appreciation of the value of nature. It has by now become fairly common for parents to have discussion with their chil-

Figure 1 The Public Opinion Trends of What Swedes Worry About



Source : Holmberg and Weibull 2010 : 13

dren about changes in natural environment. Many Swedes now consider that environment is something to worry about.

As a result, as the Figure 1 illustrates, more than half of the Swedes now worry about the state of environment, and this concern is considerably higher than their concern for economic crisis, for instance. This sort of high level of concern is verified by other public opinion polls as well. Compared with other EU countries, Sweden appears outstanding. In Sweden 75% of the people considered climate change is the most serious problem for the world. This proportion is the highest in EU member countries, with 28% people thought likewise in Latvia and Portugal (EU 2009 : 7). Therefore, in Sweden 80% of people have taken some personal action against climate change, which is again the highest in the EU, contrasting with 21% of Belgians in the region (EU 2009 : 67). While some caution is usually needed in interpreting these opinion poll results, there appears to be consistently high level of concern for environment among the Swedes compared with economic and other global issues.

3-2 Historical experience and political culture

In addition to the fact that many Swedes appreciate the value of nature, the way in which this country emerged as a modern state has also contributed to their high degree of commitment to environment and sustainability (Steinmo 2010).

Sweden is a historically homogenous nation, with relatively small population, being located at the periphery of Europe. Its industrialization started late compared with other European states, and this late development took advantage of the timing and its natural resource endowment. Sweden made a successful transition to modern industrial society largely through cooperation among organized interests representing labor, capital and the state. The result is a "universalist" welfare state, in which everyone pays high tax and everyone benefits from it. This universalism presents a sharp contrast to target approach often taken in

other countries.¹⁰⁾ The redistribution through public spending is significant, and as a result Sweden is a very egalitarian society.

The state has been playing an essential role in the entire process. Neo-corporatist way of decision making has fostered a high-level of trust in public institutions. (Neo-corporatism here signifies that the post-war liberal parliamentary democracy particularly in Europe voluntarily shared the public sphere with various social groups and consulted with them in collective decision making in one way or another.¹¹⁾ Sweden is a typical example of such.) Most of the Swedes accordingly accept the universalist welfare system as fair.

However, by the 1970s and 1980s politics and economy in Sweden were going through significant structural changes. The conventional system did not work as it used to be. The Social Democrats were voted out of the office in 1991 and several analysts thought that this would be the beginning of the end of the Swedish welfare state. Yet, the Social Democrats returned to office in 1994, and started to modify their policies in the face of new realities (including globalization). But this change was an adaptation by making the welfare state more efficient and effective rather than a simple replacement of traditional Swedish policies by those of neo-liberal measures, as happened elsewhere. In fact, Swedish welfare state has embraced such neo-liberal elements of competition and flexibility (Steinmo 2010 : 229). According to Lundqvist (2006), a political analyst, this embracement reflected a deeper change from “a culture of negotiations, interest participation and pragmatism” to a “clear rules of the game, legalism, and completion. The idea was to take Sweden into an economic liberal era” (pp.19–20 quoted in Steinmo 2010 : 73).

It was during this adjustment period when the metaphor of “People’s Home” referred by then the Prime Minister, Göran Persson was introduced. This metaphor has envisioned “a democratic family in which all its members enjoyed equal status and participated collectively in decision-making” (Tilton 1990 : 128 being quoted by Lundqvist 2004 : 1).

The historical co-evolution processes of political and economic systems demonstrates that Sweden enjoyed a high degree of adaptive advantages (Steinmo 2010 : 7). With changing contexts, Sweden is continuing with neo-corporatist arrangements with more openness and transparency. But fundamentally, their commitment to essential values such as egalitarian society, a large redistributive welfare state, and a competitive capitalist economy remains undisturbed at all (Steinmo 2010 : 81). Those who believe in pure neo-liberal ideas in Sweden are exceptional (in contrast to the United States, for instance). The public has a high level of faith in the Swedish way.

Lennard Lundqvist, a notable political scientist, emphasizes political culture as a key element that has facilitated Sweden in its shift from welfare state to the greening of it. He states that introduction and continuous engagement of stakeholders in key policy planning and implementation could not be possible without “collective memories of both sides of the public-private divide. In political systems where relations between government and target groups have historically developed through processes of consensus, the political culture is much more favourable to solutions building on high degree of target group involvement” (Lundqvist 2004 : 205).¹²⁾

Sweden’s political culture is fundamentally based on consensus and cooperation.¹³⁾ The development

of the “People’s Home,” the Swedish welfare state as often metaphorically spoken, was made possible by neo-corporatist collaboration between the state and key interest groups. The Swedish welfare state was essentially a collectivist and corporatist rather than individualistic and pluralistic in nature as seen for instance in the United States. Without such historical background, the greening the People’s Home cannot gain wide social acceptance nor political legitimacy within such the time of one generation (Lundqvist 2004 : 206).

During my visits to Sweden, several officials commented that environment is no longer a partisan issue in Swedish politics. Both political left and right consider that environment and sustainability issues are critical for Sweden. In that sense, this understating is a bi-partisan consensus.¹⁴⁾

3–3 Government initiatives to lead the world

Sweden, as a result of such historical evolution, opted to lead the world in environment and sustainability issues, instead of remaining as followers. There are numerous examples to support such generalization. For instance, the national government has introduced carbon tax relatively early compared with other countries.

The national government also encouraged local governments to invest on energy-and-environment-related fields by introducing large-scale subsidy programs of LIM and KLIMP. As these subsidy programs are not so common in the world (Bulkeley 2010 : 239), it merits close scrutiny (Johansson 2006 and 2007).

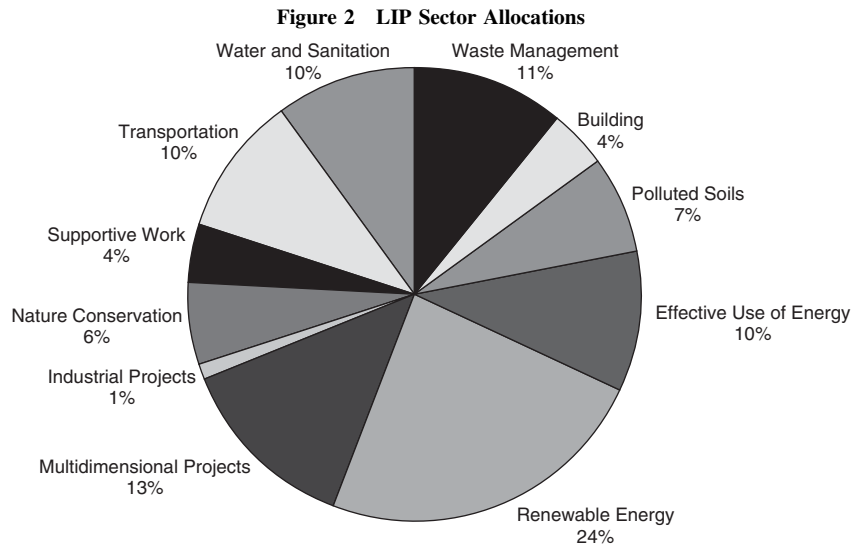
LIP followed the government support to implement the Local Agenda 21. LIP was introduced as the single largest investment program, and implemented during 1998–2002. The LIP was well “ahead of its time.” When many other countries are still struggling to operationalize national environmental agenda, Sweden has already recognized the importance of local governments (Baker and Eckerberg 2007 : 326).

The aims of LIP are several. According to the Swedish government, they include the following : “to achieve environmental improvements in local governments ; to increase investment in sustainable infrastructure and technology ; to improve knowledge about ecologically sustainable development ; to help to ensure that sustainability is given higher priority in local efforts ; to encourage all actors in society to work together to achieve sustainable development ; and to create job opportunities” (various sources of NATURVÅRDSVERKET, Swedish Environmental Projection Agency, SEPA).

Local governments have to apply for this subsidy by formulating well promising projects often in partnership with private enterprises. LIP subsidy constituted only about a quarter of the total project costs, and the local governments were asked to co-finance substantial proportion of the investment projects.

A total of SEK 6.2 billion was granted to 211 projects in 161 municipalities and two local federations (representing 55% of Sweden’s total number of municipalities) in order to implement 1,814 measures. A total investment was SEK 27.3 billion, of which SEK 21 billion was related directly to the environment. Approximately 20,000 full-time jobs were created (various sources of NATURVÅRDSVERKET, SEPA).

Larger cities have received most subsidies (almost SEK 2 billion) and middle-sized municipalities were given about half. Sparsely populated areas have received least of all, SEK 80 million. But if it is cal-



Source : Swedish Environmental Protection Agency (Made available by my visit on 10 August 2011)

culated in terms of per capita, the smaller municipalities received most (NATURVÅRDSVERKET, SEPA 2005 a : 9). Geographically local governments in the southern Sweden received more subsidy than the ones in the north (Baker and Eckerberg 2007 : 332). The sectoral allocation of LIP is shown in Figure 2.

There have been several evaluations on LIP, and many results are encouraging. LIP has contributed to the national environmental quality objectives. It is estimated that CO₂ emission of 760,000 tons has been reduced, when about half of the LIP activities were carried out. This reduction is about one fourth of Swedish climate strategy objective (NATURVÅRDSVERKET, SEPA 2005 a : 9).¹⁵⁾ Furthermore, most of the big investments could not have taken without LIP. Therefore, LIP has functioned as a successful incentive for many recipient local governments as sustainability issues came to be integrated within respective local political agenda. In addition, the LIP allowed local actors to modify project scope during the implementation, and this flexibility is believed to have contributed to cost effectiveness of the LIP projects.

The LIP created green jobs as well. This result was one of the major objectives of the LIP. Johansson (2006) estimates that this employment factor is more economically significant than the other environment variables.¹⁶⁾

However, there are several concerns about the way in which LIP was implemented. As LIP was mainly been implemented as projects, their activities were limited in time and scope. The collaboration between local governments one the one hand and private sector, NGOs and citizens on the other hand tended to last only for project duration. This kind of collaboration did not lead to much larger partnership arrangements between different local governments. The expected catalytic role was not fully played out (Baker and Eckerberg 2007 : 329).

In addition, LIP was never really fully integrated with much broader national and EU objectives including National Environmental Quality Objectives and the EU supported LIFE programme (NATURVÅRDSVERKET, SEPA 2005 b). As a result, some researchers question whether LIP has enhanced last-

ing local capacity (Baker and Eckerberg 2007).

KILMP is the successor to LIP and implemented from 2003 to 2008 with a smaller scale. The broad objectives are similar to those of LIP. Local governments had to devise their local climate strategy including objectives, means, and follow-up actions. The total of SEK 1.8 billion was granted for 126 programs and 23 special projects. KLIMP were given to 67 local governments, seven association of local governments, five county councils, and four companies. Altogether they constitute 913 projects and total investment was more than SEK 8 billion (NATURVÅRDSVERKET, SEPA 2009 : 5).

According to a government report, “[O]nly the best projects in the best climate investment programmes have been supported by KLIMP. Requirements have included good climate strategies, a holistic perspective, collaboration and grant efficiency. The focus has been on achieving direct, measurable climate effects in a long-term perspective” (NATURVÅRDSVERKET, SEPA 2009 : 4).

Recently, the government estimated that KILMP has contributed to reduce CO₂ emissions of 2 tons per year. This reduction is quite significant, as the total GHG emission in Sweden was about 64 million tons. It is also calculated that, by replacing fossil fuel with renewable energy, energy conversion of 3.2 terawatt hours (TWh) per year is attained. (In 2008 total energy consumption in Sweden was 397 TWh).¹⁷⁾

Even if these results are admirable, there are some criticism against LIP and KIMP. Probably the most significant is that the smaller and relatively understaffed local governments have little chance to receive these subsidies. Even if they could be supported by the national government and Swedish Association of Local Authorities and Regions (SALAR), such support cannot totally eliminate drawbacks of small local governments. This deficit reflects the way in which these subsidies are designed. The national government wanted local governments to compete with each other for more effective outcomes. Thus, it, on the one hand, contributed to create certain incentives for local governments which can use these subsidies. On the other hand, for those who cannot, they remain as they were before either with or without LIP and KLIMP (Lundqvist and von Borgstede 2008). LIP and KLIMP may even pushed the relationship of different local governments more as rivalries rather than partners (Baker and Eckerberg 2007).

3–4 Decentralization and autonomy of local governments

In Sweden, local government has a long historical tradition. Several hundred years ago parishes were responsible for taking care of the poor. In the middle of the 1800s, the local governments were entrusted to manage elementary schools. After World War II as the welfare state came to be pursued firmly, great responsibility for public services were transferred from central to local governments. One of the main reasons of this transfer was that local governments would know local needs better than the central government and thus would be in a better position to provided public services responding to such local needs. The Constitution promulgated in 1974 recognizes such autonomy of local governments in promoting common interests within their jurisdiction.

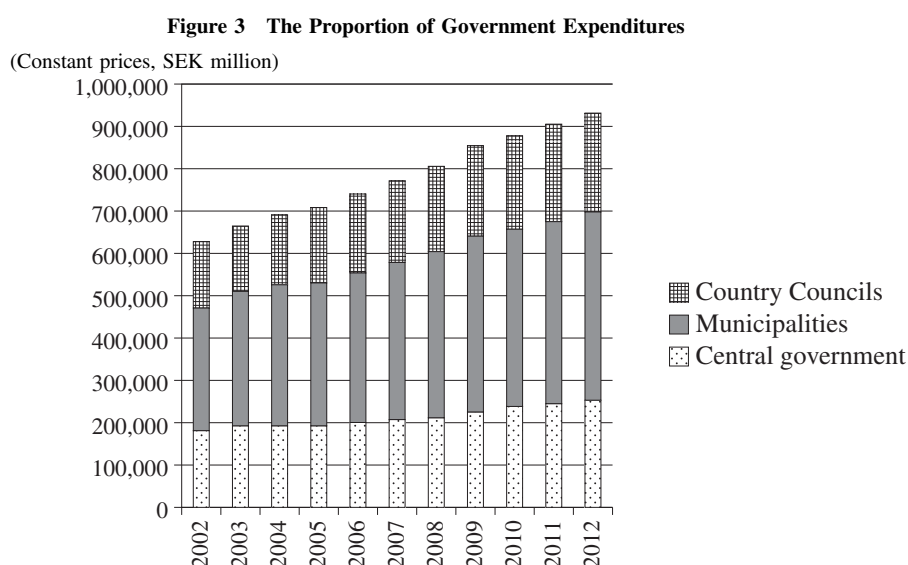
Thus, in contemporary Sweden, the three tiers — central government, 20 country council, and 290 local government (municipality) — constitute democratic government. The local governments are now in charge of the wide scope of responsibilities : social services ; childcare and pre-schools ; elderly care ;

support for the physically and intellectually disabled ; primary and secondary education ; spatial planning : health and environmental protection ; refuse collection and waste disposal ; rescue services and emergency preparedness ; and water supply and sewerage. It is fair to characterize that local governments in Sweden enjoy constitutional mandate and authority to promote the common interests within their jurisdiction. Thus, Sweden is often characterized as decentralized welfare state.

The important role played by local governments is illustrated by the extent of public expenditure as well. The total expenditure of local governments in 2011 was SEK 516 billion, which are mainly financed by their own local taxes (which is about SEK 355 billion) (Statistics Sweden 2012). Very roughly about 65% of the total public sector expenditures were made by local governments in the first decade of the 21st century (Knutsson et al. 2008). As seen by the graph below, the proportion of expenditures incurred by sub-national governments within the total public sector expenditures continues to expand up to now. It is therefore very important to note that the extent of decentralization in Sweden is very significant.

In Sweden, local governments have historically played an important role in environment. In the 1950s, local governments were already one of the key actors in improving water quality. During the 1970s and 1980s, further decentralization took place as related to the authority for environmental policy. As a result, by the 1990s, local governments were in a position to lead the processes of the Local Agenda 21 (Baker and Eckerberg 2007 : 327 ; Feichtinger and Pregernig 2005).

The economic downturn and the crisis of the welfare state put many local governments in difficulties in discharging the expected duties. With the Municipal Act of 1991, autonomy of local governments was further enhanced. What is particularly important is the local government function of development planning. Each local government prepares five-year master plan, which presents overall directions of localities. The master planning has become rolling, and through this continuous exercise, future visions for land use patterns and public service provisions are updated (Lundqvist and Biel 2007 : 22). The Act also clearly stipu-



Source : Statistics Sweden 2012 and the graph was compiled by the author

lates that local governments can levy income taxes on their citizens in order to carry out required responsibilities (Lundqvist and von Borgstede 2008 : 304–305). The Municipal Act of 1991 also allowed local governments to make their own organizational arrangement in the area of environmental activities. This freedom in fact resulted in considerable variation among local governments' institutional setup (Knutsson et al. 2008).

But, there are certain problems in decentralization in Sweden. First, there is a significant variation among local governments. For example, even if the average population of one local government is in the magnitude of 15,000, the biggest population of the capital city of Stockholm is approximately 850,000,¹⁸⁾ and the smallest population is about 2,500 (SALAR 2009). The disparity among local governments is large. Second, the overall framework still needs to be clarified. The country council, originally introduced in the middle of the 1800s historically, now mainly in charge of health care (SALAR 2009). Although their role has been so far limited, it has not yet been very clear how the relationship between different tiers of government will evolve in years to come.

In summary, local governments in Sweden have considerable authority as well as responsibilities for taking actions for achieving sustainable localities (Bäck and Johansson 2010). Building on their experiences of the Local Agenda 21, they are asked to implement effective measures in, *inter alia*, energy, transport, housing and waste collection. However, this does not mean that all local governments are equally competent and well resourced. While relatively large local governments can deploy core professionals with clearly defined guidelines and procedures, smaller ones tend to sideline environmental issues as a kind of secondary priority. Accordingly, there became a recognizable gap between the leading local governments and those who lag behind, particularly in the Local Agenda 21 processes (Baker and Eckerberg 2007 : 327–328).¹⁹⁾

3–5 Role of civil society such as SSNC and Natural Step

Sweden is also a country where civil society is vibrant. One form of such vibrancy is NGOs. Although there are numerous environmental NGOs in Sweden, brief description of two different types of NGOs would help us understand the early rise of civic activism in environment as well as the relationship between such NGOs and other stakeholders.

The Swedish Society for Nature Conservation (SSNC) was founded in 1909 by those who were concerned with nature and environment. This was the year that the first national park in Sweden (the first in Europe) was established. Around the 1960s ordinary people joined SSNC as many Swedes started to worry about increasing degradation of natural environment due to industrialization. SSNC was mainly working on conservation issues in Sweden until recently. It is now the oldest and the biggest environment organization in Sweden, with more than 180,000 membership and 274 local branches throughout the country.²⁰⁾ Their main interests currently include climate change, marine environment, forestry, environmental toxics, and agriculture. SSNC now collaborates with several partners both in Europe and in developing countries. The sheer magnitude of this scale and membership itself is quite outstanding.²¹⁾

It is also interesting to note that the way in which SSNC expresses its aim sounds very much like the

government of Sweden pronounced its strategy of environmental sustainability. It therefore confirms that the ambition for Swedes to lead the world for sustainable future is broadly shared among different stakeholders. The website of the SSNC states as follows :

“By increasing the tempo of the Swedish climate change, we can influence the international negotiations that are still marked by the image that the reduction limits the opportunity for greater prosperity. The Swedish experience shows in fact the opposite” (being translated into English)

The Natural Step, established in 1989 by a scientist Karl-Henrik Robèrt, is also a Swedish born yet by now international NGO promoting sustainability. The Natural Step primarily works with the business sector in trying to incorporate environmental agenda into their day-to-day business activities. In short, they try to convince many notable business leaders that sustainable solutions not only bring benefits to environment but also to their business as well. This particular approach was taken by the founder as a strategic choice, primarily because the environmental movement in the 1970s were essentially anti-government and anti-business and did not bring effective social change toward sustainability. The Natural Step has succeeded in convincing many key business companies such as IKEA (furniture retailer) and Max (hamburger chain) in Sweden, and now tries to expand their scope of activities abroad including the developing countries.²²⁾

While the approach by the Natural Step can be considered as that of ecological modernization, their strategy worked quite successfully at least in Sweden. One of the reasons for this success appears to relate to the neo-corporatist way of thinking in Sweden. As the leaders representing different interest groups should consider wider pictures and social implications, the strategy of the Natural Step was readily acceptable by the business leaders.²³⁾ With this success, the Natural Step contributed to establish a unique post-graduate program of “Strategic Leadership towards Sustainability” at Brekinge Institute of Technology.²⁴⁾

4 Växjö – the Greenest City in Europe

Växjö is located in southern Sweden, and surrounded by forests and lakes. It literally means that roads meet where the lake is located. The population is approximately 80,000 out of which about 60,000 live in the city. This part of Sweden was historically poor, primarily because the soil was not very fertile. About 1.3 million people (roughly 20% of the Swedish population) migrated to from this area to the United States, primarily from the middle of the 19th century to the 1930s.²⁵⁾ Several people in Växjö emphasized that this historical background fostered the spirit of entrepreneurship and innovation.²⁶⁾ Small and medium scale companies lead the local economy (Gustavsson et al. 2009).

4–1 Historical evolution of environmental sustainability in Växjö

The engagement of Växjö on environment started in the 1960s when the local lakes began to demonstrate deplorable pollutions due to industrialization. The pollutions triggered a deep sense of crisis for local residents, because these lakes were (and still are) the central places that people often visited for walking,

fishing and swimming. The lakes constituted an important icon in Våxjö. Indeed, the name Våxjö derives from the lakes where roads meet. The city therefore decided to restore these lakes in 1969.

Since then there have been a long history of Våxjö in pursuing environmental and sustainability agenda. In the 1970s the oil crises escalated the concern of energy security. The district heating plant, Sandvik, originally established in 1887, started to use renewable bio energy in 1983 (Johanson 2010 : 208). In this area, wood chips, produced in the process of furniture making and other activities, were readily available and became the alternative source of energy. Våxjö was the first city in Sweden to start using biomass for district heating. Then subsequently, the proportion of oil used at Sandvik plant was reduced to only one percent in 2007 (Johanson 2010 : 203).

In the 1992 UNCED took place in Rio, which produced, *inter alia*, Local Agenda 21. In 1993 the city of Våxjö adopted an official environmental policy. Våxjö needed to prepare its Local Agenda 21. What is important is that Swedish Society for Nature Conservation (SSNC) cooperated, from 1995 to 1997, with the city authorities in preparing the Local Agenda 21. During this period, there were intense discussions involving political leaders, city officials, private companies, citizens, the SSNC staff and representatives of other NGOs.

The scope of this cooperation was ambitiously wide. While this process was coordinated by the city officials, grassroots involvement received due attention. The range of technological development and production shift was diverse ranging from the promotion of renewable energy for district heating to organic farming and environmental land use. It was also acknowledged that Våxjö was not to sacrifice socio-economic well-being by promoting suitability concerns. Rather, enhancing environment was hoped to increase economic competitiveness (Våxjö 1995).

It is very interesting that at this stage Våxjö already aimed for a pioneer of environmental city. This ambition was supported by both left and right political parties. SSNC explained that the restoration of lakes and other endeavors were presenting promising prospects for further environmental improvement. Local political leaders have learned especially from the experience of the lake restoration that real commitment and having a long-term vision can bring success (Johanson 2010 : 203 ; Våxjö 1995).

In 1996 Våxjö decided to become a fossil fuel free city. At this stage Våxjö did not determine the target year. It is nonetheless remarkable that this was before the Kyoto Protocol was adopted. Våxjö was the first local government in Sweden, and possibly even in the world, to adopt such an ambitious goal. (The target year was later on set as 2050 when county of Kronoberg, of which Våxjö is a capital, decided a similar goal in 2007 (Johanson 2010 : 204). The goal was subsequently modified in 2010 to reduce emissions of carbon dioxide from fossil fuels, per inhabitant, by 55% between 1993 and 2015 and to become fossil fuel free completely by 2030.)

There are multiple avenues through which this ambitious goal would be achieved. The main means included education and behavioral change, improving energy efficiency and energy shift to renewables, promotion of bicycles and public transport, and more energy efficient housing. Promotion of biomass is especially important for Våxjö as it not only to reduce the fossil fuel consumption but also to mitigate negative effects of acid rain (ICLEI 2000).

In 1997, all administrative departments and companies owned by the city started to monitor their CO₂ emission levels from transportation and heating. Växjö was the first city in Sweden to conduct a green-house gas emission inventory (ICLEI 2000).

The Local Agenda 21 was officially adopted in Växjö in 1999. Although there were several components in the Local Agenda 21, one essential feature is that the Agenda targeted local schools as a critical hub to increase awareness and understanding about ecological sustainability (Granberg and Elander 2007 : 543). This emphasis, together with other information dissemination campaigns, appeared to be important as political leaders, business companies, local residents started to access to comparable levels of information. This situation contributed to reduce misunderstanding and miscommunication (Dale 2011)

Växjö's decision to become a fossil fuel free city coincided with the national government support for local governments in making investments toward sustainability. Växjö took advantage of this opportunity and applied for the national government subsidy of LIP, which was received in 1998 and 2001, with a total amount of SEK 278 million. These funds were used for, *inter alia*, replacing oil with biofuels in district heating and other heating facilities (Kasa et al. 2011 : 218–209).

Växjö also received KLIMP subsidy in 2004, 2007 and 2008. The KLIMP funds were used for, among others, developing a bicycle path lanes, replacement of old stoves by new and more energy efficient ones at houses which are not connected to district heating, and increasing coverage of district heating and cooling (Växjö undated).

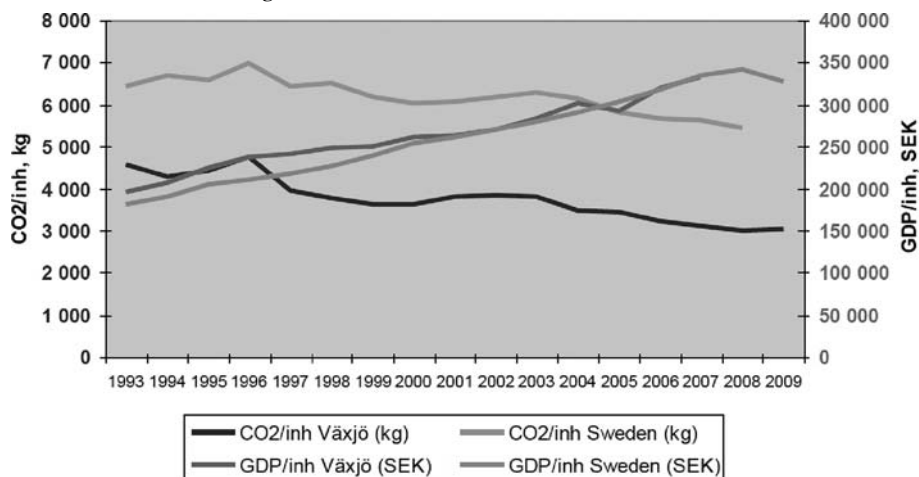
One of the notable examples in energy is the introduction of new fuel. In 1999 the first fuel station for bioethanol was put in place in Växjö. Initially, the spread of ethanol station was very slow. Since 2002 the sales amount of ethanol increased. In 2003 ethanol came to be blended with gasoline. Now almost all types of gasoline contain approximately five percent of ethanol (Johanson 2010 : 210).

It is also worth mentioning that in 2003 Växjö introduced a so-called eco budget system with the collaboration with ICLEI (association of Local Governments for Sustainability), after several years of preparation. This system originates from the Aalborg Charter in 1994. The eco budget is a new and innovative accounting system. In conventional accounting, environmental hazards constitute “externalities,” and thus are not included in monetary accounting. The idea of eco budget is to include both “goods” and “bads” in balance sheet so that managers can make right decisions. ICLE explains that the three main principles are following financial budgeting procedure ; incorporate “plan-do-see” management cycle ; and aiming for sustainability. In 2007 the scope for eco budgeting was even expanded into social issues such as “integration, equality, child convention, health and democracy” (Emilsson and Hjelm 2009 : 727).

4–2 Impressive achievements in Växjö

Through these endeavors, CO₂ emission per capita declined by 34% from 1993 to 2009 (as illustrated by Figure 4). By 2010 a reduction of approximately 22% CO₂ emission has already been achieved. In this process, the jobs have been created primarily in the field of service and IT industries, which may be interpreted as “green jobs.” Thus, the Figure 4 demonstrates that increase of GDP per capita and reduction of CO₂ emission took place simultaneously.

Figure 4 Economic Growth and CO₂ Emission



Source : the city of Växjö

The remarkable success of Växjö started to attract international attention as well. A series of renowned awards were given to Växjö. In 2007 Sustainable Energy Europe Award (in the category of sustainable community) was granted. In the same year, Union of Baltic Cities Environmental Award was also given to Växjö. In addition, several well-known international medias report the marvelous success of Växjö as well.

The outstanding achievement of Växjö is verified by the surveys carried out by SSNC as well. This survey is to review climate initiatives taken by Swedish local governments. The surveys were conducted in 2005, 2007 and 2010. The results of 2010 was that Östersund ranked first, followed by Stockholm, Malmö and Växjö. Växjö was commended to set up targets which was more ambitious than the national aim, and consistently pursued such ambition. Even though the survey is more comprehensive than the CO₂ emission reduction, Växjö was one of the cities that received the highest score among the local governments in the area of CO₂ emission reduction.²⁷⁾ These rewards and international recognition undoubtedly contributed keep motivating political leaders and administrative staff to continue working on the demanding tasks of sustainability.

4-3 Reasons for Växjö's success

Växjö is a prime example that made a successful transition to “denser, greener and fairer” city. It contained the urban sprawl by creating a compact urban center with bike lanes and pedestrian friendly layout, together with public transport network. Växjö has reduced the CO₂ emission remarkably. With the compact and readily accessible public transport, it also realized fairness. There are several key factors for such remarkable success.

Broad-based political commitment

There has been a wide range of political support to and bi-partisan consensus of environmental and

sustainability agenda. The cooperation with SSNC was very important in this aspect. As Gustavsson and her colleagues summarized, “[T]hanks to the cooperation between the municipality, the national SSNC organization, and an active local group of the SSNC, the politicians and officials in the city were educated in environmental issues, leading to discussions where the politicians could come to an agreement on the climate goal. The political consensus on the local climate policy has been crucial to the successful climate-change-mitigation policy” (Gustavsson et al. 2009 : 65). In short, successful collaboration with SSNC resulted in mainstreaming environment into overall city agenda in the 1990s. Even if consensual politics is norm in Sweden, this mainstreaming helped Växjö very much in integrating environmental agenda into the overall city activities and move the sustainability agenda forward on a bi-partisan basis.²⁸⁾

This broad-based political support was very fortunate for Växjö. Because the notion of sustainability tends to be abstract and complex, and needs to be articulated with the support of the political leadership, many local governments even in Sweden find it difficult to prioritize and integrate sustainability with other tasks (Keskitalo and Liljenfeldt 2012 : 23). In Växjö, this bottleneck was overcome largely thanks to the bi-partisan support. The wide support also facilitated continued updating and modification of environment and sustainability agenda as local situations change in Växjö.²⁹⁾

A core of key leaders in forging informal alliance

This broad political consensus and political support helped “committed and quite informal teams of municipal administrative staff, local politicians, sometimes with participants from the business sector, NGOs and research” to take leadership roles in promoting new ideas and activities (Kasa et al. 2011 : 225). Some analysts emphasize the role of “green inside activist” who are local government staff having access to key resources and participate in policy formulation (Hysing and Olsson 2011).³⁰⁾ Yet, insiders alone would not be able to make big change. What matters is that they make informal alliance with a wide range of stakeholders both within and outside of the city administration. The alliance can lead to more coordinated and coherent administrative orientation by overcoming departmentalization and silo mentality (Kasa et al. 2011). This is precisely what happened in Växjö.

In addition, as promoting sustainability does not constitute partisan conflict, the broad political consensus helped to create relatively open-minded attitude of political and administrative leaders. As a senior administrator who witnessed the evolving processes in the 1990s recalls :

Around the middle of the 1990s, a new cadre of young and well-educated staff joined the city government office, and while they did not have much experience in administration, because of their enthusiasm, others were willing to listen to their new ideas. Within both parties, there were also some new people as well. They changed the dynamics of discussions among politicians as well as the relations between politicians and administrators. All of these were very fruitful for our current success.³¹⁾

Relatively young political leaders and administrative staff, who received environmental education, worked with other local stakeholders to create a political agenda, which has lasted even to the present day.

Multiple outside funding sources

Clearly, Växjö's success was made possible by having accessed to various funding sources. Växjö could use LIP and KLIMP meaningfully. The government subsidies helped Växjö "to realise items that [Växjö] had never been able to do in another way. The same goes for KLIMP. It increased the speed of implementation. There would not have been done as much without this, that's for certain" (interview of local stakeholder, quoted in Kasa et al. 2011 : 218). As Växjö was ahead of the national government in their strategic thinking about environment and sustainability, once LIP and KLIMP were introduced, Växjö benefitted from these programmes.

Yet, the grants from the Swedish government were not the only source of funds. For instance, Sustainable Energy Systems in Advanced Cities (SESAC) was a EU-funded initiative to build sustainable energy systems in European cities, and was implemented during 2005–2010. Växjö played the role of project coordinator, and was one of the four major cities, together with 19 partners. SESAC further assisted Växjö to expand the network of district heating and cooling using renewable energies, to construct energy efficient buildings including passive house apartments, and to increase resource efficiency through poly generation from biological waste.³²⁾

What is of significance is that these funds are integrated with the overall strategy of Växjö to accelerate local suitability. Växjö overcame a common problem stated by the former city manager of Fredrikstad, Norway :

It is not enough to get money for projects or positions. The most difficult part – whether you receive money or not – is to avoid it ending up as an additional agenda which only lasts as long as it is financed by the national authorities. The initiative neither arises nor is maintained unless it is institutionalised in the municipalities' agenda and priorities. It remains an addition (Kasa et al. 2011 : 226).

Participation in international network of cities

Växjö has been participating in numerous international networks of local governments in order to promote sustainability agenda. Compared with other local governments in Sweden, Växjö's association with these networks started earlier, and is represented relatively more widely not only by the city authorities but also by other stakeholders including private companies (Gustavsson et al. 2009). Växjö was one of the original five local governments participated in Challenging Municipality project during 1998–2000. This project later evolved into the network of "Climate Municipality" with more local governments (Granberg and Elander 2007).

Växjö's association with international networks is numerous. It is also a signatory of the Covenant of Mayors in EU. Växjö has been collaborating with ICLEI through eco budget and other activities. The city also joined the Climate Alliance in 1996, and the Alliance is network of local governments in Europe and indigenous rainforest people, with the current membership of more than 1600 local governments.³³⁾

The presence of the city authorities in these networks certainly reflects the high level of ambition and political commitment of Växjö to lead the processes toward the greenest city in Europe. The involvement

of the companies is especially relevant to develop the new energy source of biofuel. By participating in larger networks, Växjö clearly wanted to tap knowledge gained through research and development of renewable energies. This kind of participation clearly brought tangible results that culminated in the Sandvik plant and other facilities.

University and private companies

The roles played by the local university and private companies were thus very important. Växjö University, which later on renamed as Linnaeus University, was already accumulating research results in biomass energy in the 1980s.³⁴⁾ Indeed, their know how was effectively used at the district heating plant of Sandvik. Several private companies in Växjö were interested in the energy shift to renewable energy. They were enthusiastic to work with the city authorities and the University. A kind of consortium was formed to develop and promote bioenergy, and with skillful maneuver, they succeeded in creating promising markets for these companies (Gustavsson et al. 2009 : 69 ; ICLEI 2000). Without their contribution, the district heating system could not have made such a rapid energy shift.

What is particularly noteworthy is a kind of brand effect. As Växjö came to be well known, this place started to offer some advantages for those who would like to start new venture business in the field of environment and biofuel. For political leaders, protecting and further enhancing the competitiveness of environmental business is of their interest as well. As a city councilor expressed, “collaboration with the university and the business sector is now necessary, and there is a bi-partisan consensus on this point.”³⁵⁾ This is a common pattern in famous eco cities in Europe, where brand effect brings a virtuous cycle ; the more successful a city is on its environmental records, more environmental business companies wish to establish their head office in such places. Thus, the city benefits from both environmental management and job creation.³⁶⁾

4-4 Remaining challenges

The story of Växjö appears very impressive. However, the city still face some challenges. First of all, the success of Växjö was much facilitated by the very fact that many of the old manufacturing industries moved out of the area (and out of Sweden) due to globalization. Simply put, as cheap products made in China floods the whole world, it has been never easy to retain such industries in Scandinavia. Other cities where such important industries are located as car manufacturing and steel making, transition to green city is far more difficult than in Växjö. In that sense, although much of the remarkable achievements there were made possible by deliberate choice, there is a certain element of chance as well. By 1990 Växjö did not retain big and heavy industries, which was probably lucky for Växjö to make a smooth and rapid transition to the green city.

Even so, not all the problems have been solved. One remaining challenge is to reduce the GHG emission from transport.³⁷⁾ This difficulty is common not only among other local governments in Sweden but in the world as well. Usually, for effective traffic regulation and management, larger-scale effort than local government level is needed, as private vehicles often commute from one city to another. Sweden is no ex-

ception in this regard, and is now struggling to find a right fit between mobility scope and administrative levels.

Finally, sustainable consumption emerged as a very new theme. Even if Växjö has done a lot in raising awareness of citizens about ecology and sustainability, as elsewhere in the developed countries, changing life style and consumer behaviors are never easy. Some of the recent documents of Växjö list further promotion of environmentally friendly life style as one of the key challenges.³⁸⁾

5 Discussions : How to understand Sweden

The descriptions so far presented interesting historical background and policy measures taken in order to attain sustainability. How, then, can we understand the remarkable achievements of Växjö in particular and Sweden in general? The key for our rich understanding of this important case study rests with two contrasting perspectives of ecological modernization and deliberative democracy.

5-1 Is Sweden a case for ecological modernization?

As ecological modernization assumes that sustainable society will be achieved by maintaining the current political and economic systems (Mol et al. 2009), this form of modernization does not require political authorities and their followers to alter their life styles fundamentally. Thus, for some, this approach may be the only realistic way forward. Is Sweden an example of this kind of ecological modernization?

There are certain elements to answer positively to this question. One of the important considerations behind Sweden's ambition for sustainability agenda is their global economic competitiveness. This economic concern relates to one of the fundamental puzzles why Sweden opted for more deduction of GHG (green house gas) emission when the country was allowed to increase it. From the viewpoint of rational choice, this decision was illogical.

Apparently for Sweden, its decision was not irrational at all. Their consideration was that by leading the world toward sustainable future would be good for both Sweden's economic competitiveness and its ecology. It is certainly true that this sort of "win-win" scenario is more readily acceptable rather than those of "win-lose" ones. This popular discourse of "win-win" scenario, frequently seen in political statements and policy documents (Zannakis 2009), appears to be more compatible with the notion of ecological modernization (Mol et al. 2009). The "win-win" discourse makes it easier for many Swedes to accept both the welfare state and equitable society on the one hand and ecological sustainability on the other hand, as the discourse has been portrayed as more compatible objectives.

Furthermore, instead of remaining as followers, leaders can set global standards for years to come, both within EU and in the international community. This strategy is especially important ; as the EU is trying to lead the world on environment and climate change, if Sweden can set environment and sustainability policy frameworks within the EU, this kind of positioning would give a high likelihood for Sweden to lead the world as well. If the anticipated returns are both economic and political,³⁹⁾ then this is no small deal (Sarasini 2009).

The government programmes of LIP and KLIPM certainly reaffirm this interpretation. These signifi-

cant subsidy programs appear to reflect ecological modernization, as they supported investments in relatively large-scale infrastructure such as district heating plants using new biofuel energies (Baker and Eck-erberg 2007 : 331). They promoted the use of modern technologies to increase energy efficiency and to reduce GHG emissions (Lundqvist 2004 : 11), and by so doing they also attempted to expand markets for these new biofuels.

Indeed, the way in which Växjö evolved partly supports this claim of Sweden as an example of ecological modernization. In Växjö the private companies were very keen to develop new technologies of bio-fuel, they were one of the key actors in leading the process toward ecological sustainability. Their economic return has been substantial. This benefit has created a reinforcing cycle of research and development. As renewable energies came to be profitable, more research and investments were made by the university and the private companies, which in turn contributed to brand Växjö as the greenest city in Europe.

Moreover, the way in which political participation and deliberation have been organized within the overall decision-making processes tends to be limited, according to several critics. This criticism also support that Swedish experience and the innovations in Växjö would resonate more with ecological modernization instead of a more radical change.

The critics point out that the kind of citizen participation in Sweden and in Växjö were more tokenistic and rhetorical than genuine. One of the main reasons for this limit is that Sweden mainly adopted top-down and state-led processes toward sustainability by combining such means as legal requirements, investment funds, and institutional support for encouraging the efforts of local governments (Kasa et al. 2011 : 212).⁴⁰⁾ A research team of Kasa and his colleagues characterize that “Sweden is a good example of recent tendencies towards stronger central government steering of local action in prioritised areas” (2011 : 217 ; also Meadowcroft and Bregha 2009 : 13).

As a result, Hildingsson (2010) explains that even if there were citizen participation, such has not fundamentally altered the conventional hierarchical governance. Instead it merely opened up some space within the hierarchy (146 and 161 ; Bäckstrand et al. 2010 b : 13). Likewise, although there were some deliberations, such are :

rather applied to extract policy-relevant knowledge, [to] negotiate political compromises and to build coalitions around specific policies and their implementation. In this regard, [public] inclusion in Swedish policy-making is hardly deliberative, but is rather based on participatory mechanisms informed by liberal accounts of preference aggregation and compromise (p 159).

5–2 Or is Sweden an example of more radical change

These assertions that Swedish efforts are still in line with ecological modernization surely holds some truth. Yet, is it the whole story? In Växjö, certain aspects of ecological modernization took place. But probably that is not the entire story (Meadowcroft and Bregha 2009 : 13). In Växjö in particular and in Sweden in general, there has been a tradition of neo-corporatist way of decision making. Neo-corporatism has certainly assisted consensus-building processes and collective decision making. In Växjö, there were

diverse types of stakeholders engaged in dynamic process of changing this city. The local university and private companies participated in technology development. SSNC's local branch was also actively engaged in the early phase of the evolution, which laid the foundation for subsequent bi-partisan consensus over sustainability.

With the increasing range of stakeholders being engaged in the process, the new types of governance appeared, many of which appear to be effective. There were certainly "green inside activists" (Hysing and Olsson 2011) or "policy entrepreneur" (Bulkeley 2010). They developed loose and informal network of ecological enthusiasts who are both with and outside of the city authority. This kind of flexible coalition of key actors worked effectively to set some of the important agendas and also to implement innovative policies (Kasa et al. 2012). Indeed, it would be appropriate that they constitute an important element of the green public sphere as it is "informally constituted spaces of open communication, , , [and] are bounded indeterminately and cannot be contained within the formal jurisdictional or territorial boundaries of a nation state" (Torgerson 2006 : 724).

In addition, there are multiple channels for ordinary citizens to express their views and participate in discussions related to policy planning and implementation. The opportunities for citizen engagement includes, *inter alia*, sending comments to the city office, contacting local party officials, and addressing their concerns to councilors and/or to the mayor. Nowadays, the method of communication includes using the Internet as well as more conventional meetings. Although these diverse possibilities are not created for the sake of environmental agenda per se, the city has accepted the reality that intensive and extensive public discussion is time consuming, and the decision-making processes sometimes become too slow. But experiences have informed that such slow and "deeply entrenched deliberative tradition in Swedish state governance" yields good results in the end (Bäckstrand et al. 2010 a : 220).

It, however, remains to be seen whether this new governance arrangements have fundamentally changed the way in each stakeholder understands democracy or not. It is far from certain if we can call the evolution in Växjö as ecological democracy, a kind of new democracy which is deemed more appropriate for the green state (Eckersley 2004 ; Eckersley 2006 ; Dryzek 2013). Lundqvist (2004) considers that what is often renowned as citizen participation in Sweden still remains symbolic rather than substantive. The actual process is still strongly influenced by experts and those who have access to power (Lundqvist 2004 : last chapter). In addition, allowing various stakeholders in complex policy process surely mean more tensions and conflicts among diverse viewpoints rather than automatic harmony and consensus (Lundqvist and Biel 2007 : 24). It is, nonetheless, still impressive that novelty of governance has appeared and worked effectively to a large extent, although this of course does not signify that such success was without any problems.

5-3 Compounded effects of opening up of political space for citizens

The case of Sweden in general and of Växjö in particular clearly carries a sort of dual character. On the one hand, the processes for change are still led by the national government, and their consideration of economic competitiveness support, at least partially, the notion of ecological modernization. On the other

hand, something else has also been taking place. A new kind of governance arrangements was introduced, and formal and informal networking of essential actors started to affect the way in which decisions are being made in Växjö.

It is far from certain at this stage in which direction this dual character will lead to. In the years to come, it may become more high-technology oriented modernization. Or, future concerns might emphasize more about how ordinary citizen can benefit from such new technologies through deliberation in policy making. What is very clear is that these complex processes are related to so called “eco-state restructuring” (White et al. 2010). Ways in which environmental and sustainability issues are formulated and tackled affects the nature of public authority fundamentally (Dryzek and Dunleavy 2009). This is precisely because governing process of such key issues as sustainability profoundly affects how authority is formulated, shared, and legitimized.

Once again, interpreting the rich Swedish experience does not necessarily converge in one common understanding. Some may think Sweden as an extension of its political tradition of neo-corporatist governance. It is difficult to refute this understanding precisely because neo-corporatist decision-making tradition enabled Swedes to adopt some of the most ambitious environmental policy targets and instruments. Elite-led and largely top-down initiatives have made the administrative procedures more accommodative to citizen involvement.⁴¹⁾

But probably, this understating is only a half of the whole story. By encouraging more citizen participation, the processes inevitably affect dynamics not only between policy makers and citizens but also the relationships among different types of elites and stakeholders. Even if local democracy as of now has not been fundamentally evolved into the deliberative ideal, it tends to be doubtful whether it will remain unchanged in many years to come. As seen in Växjö, the changing dynamism among stakeholders has already started to affect governance significantly.

In short, Sweden may be in a long and gradual transition from more conventional ecological modernization to a more radical green state. Yet, this does not mean that something better will be attained in a linear process. Nor it will signify that more livable future can be achieved with no conscious efforts and sacrifices.

This transition may pose unique obstacles for Sweden. Lundqvist is keenly aware that successful factors that enabled “Greening People’s Home” can become barriers for further transition to ecological statehood. Neo-corporatist governance was functional precisely because the small number of political and socio-economic elites discussed and agreed on key essential issues. Yet, as the ecological statehood both normatively and practically requires much deeper involvement of diverse segments of public in designing and implementing policies related to environment and sustainability risks, there is no guarantee that the same negotiation mechanism that used to work in the past will continue to deliver desired outcomes for many in the future. If the entire process continues to be driven by experts and their special type of knowledge, such process may alienate ordinary citizens. Particular types of compromise and accommodation among a relatively small circle of elites might be interpreted as a culture of collusion, no matter what sort of good intentions that these elites hold (Lundqvist 2004 : 216–217).

These are serious anxieties. However, the actual possibility in which culture of collusion by a small circle of elites would alienate the general public may be slim in Sweden at least for three reasons. First, the historical evolution of the Swedish welfare state is the universalist in character (Steinmo 2010). This universalist attribute in which all are taxed and all benefit from such taxes differs significantly from pluralism, in which organized interests compete and attempt to obtain due share through political competition. This universalist orientation seems more compatible with some of the crucial ethical considerations associated with distributional equity of “environmental bads” and sustainability effects. In other words, one of the common problems of rejecting such bads in “our backyards,” could be more effectively dealt with in such a universalist policy orientation than in pluralist politics. Even if nothing is for certain in the future, a high level of public acceptance of the universalist character can contribute to prevent a small segment of interest groups from developing a kind of “too close for conform” relations with regulatory authorities.⁴²⁾

Second, Sweden is also well-known for information disclosure and dissemination to the public. This high degree of public information sharing is also a historical achievement. Even if there are still efforts needed to facilitate and harmonize different types of knowledge much needed for sustainable society in the future (Nilsson et al. 2012), remarkable level of public access and openness of government information is a credible asset for Sweden to prevent the culture of collusion. It is therefore not considered highly likely that neo-corporatist way of decision making led by a small elite circle would turn into a culture of collusion in alienating the public at large, although this does not guarantee at all that the Swedish tradition can continue functioning in years to come.

Third, the very fact that there are multiple opportunities for ordinary citizens to express their views about environmental issues is a good asset. The Nordica countries have developed such multiplicity at least partly in their historical processes of nurturing neo-corporatism. In contrast with other developed countries (which rests more on liberal democracy), the multiple opportunities for nurturing public space is commendable.⁴³⁾ Combined with the high level of information dissemination, the wide-spread opportunities of public discussions appear to be successful in preventing “democracy from sleeping” once elections are over.

6 Conclusions

Defining sustainability agenda in national and local contexts, and operationalizing such agenda in existing administrative structures and modify them as necessary is a very demanding task, to say the least. Realizing tangible outcome together with diverse and often competing stakeholders is no simple linear process. These processes are certainly not technical but essentially political. The aim for such transformation is not value neutral but clearly value driven and socially constructed. Thus, success in one place does not signify same approach would automatically work elsewhere as well (Keskitalo and Liljenfeldt 2012 : 17).

Having examined the experience of Sweden in general and in Växjö in particular, it might be said that two aspects of top-down and bottom-up approaches are well blended in this part of Scandinavia. The national government wanted the local governments to lead the complex processes toward sustainability, es-

pecially engendering tailor made solutions in each locality. The Swedish government provided large subsidies through LIP and KLIMP. Conscious local governments such as Växjö responded to these incentive mechanisms, mainly because the political and administrative leaders were already keen to take concrete measures toward ecological sustainability.

Even though no firm conclusion can be made, Sweden appears to be at an important crossroads, as the experiences of Sweden presents both aspects of more conventional ecological modernization and some elements of a more radical deliberative democracy.

Although more research is needed to examine in which direction this transition will be unfolding, we cannot totally exclude the possibility in which Sweden is in a gradual transition to the green state where ecological democracy is practiced as a norm.

It appears that several key factors which are supportive to this transition can be observable in Växjö in particular and in Sweden in general. It is without any doubt that for any new type of democracy to take deep roots in society, long time is needed. As Sweden decided to foster sustainable society especially since the 1990s, it is still much too early to make a definite conclusion about the nature of this important transition.

It is definitely helpful for us to know in what ways other places can emulate the remarkable achievement of the relatively small city of Växjö. It would be very useful to give further consideration to why other local governments in Sweden cannot be as successful as Växjö. In short, additional research is particularly needed for identifying the potential limits of the Växjö model. Sweden and Växjö, therefore, will continue to be good places for environmental scholars and activist to keep a close eye on in the years to come.

Notes

- 1) In this article, the terms of “sustainable development (SD),” “sustainable society,” and “sustainability” are used interchangeably. For good review of sustainability, see, for instance, Kates et al. 2005 ; Redclift 2005.
- 2) I owe this nice expression to Dr. Anton Cartwright at the University of Cape Town (personal interview, 6 February 2012).
- 3) Indeed, scholars such as Hoffmann (2011) place more hope on such networking since the United Nations Framework Convention on Climate Change has increasingly become more disappointing to reach meaningful agreement.
- 4) This article focuses on environment and sustainability agenda of Sweden. Yet, Sweden is well known for, *inter alia*, the very generous welfare system, most egalitarian society in the world, and very competitive economy in global markets. Steinmo (2010) provides a remarkable account of this seemingly impossible combination.
- 5) In this article, local governments mean municipalities, whose Swedish term is *kommun*.
- 6) Local Agenda 21 processes in Sweden were outstanding compared with other countries. They contributed to innovations in local public governance and new experimentations of stakeholder and citizen participation. But it is questionable whether they have succeeded in promoting local democracy, as argued by some observers (Hildingsson 2010 : 152–153).
- 7) Personal interviews of officials in Stockholm and Växjö respectively, 12 August 2011 and 31 August 2011.
- 8) For the administrative reform in Sweden, see Pollitt and Boukaert (2011).
- 9) Lundqvist (2004) focuses on the 1990s as he thinks this is the time that sustainable development came to be gradually accepted both in Sweden and international community.
- 10) By targeting, the rich are usually taxed and the poor receive benefits.
- 11) For a good review of corporatism and neo-corporatism, see Streeck and Kenworthy 2005 ; Molina and Rhodes

2002.

- 12) This view is agreed by another observer : “With Sweden’s long tradition of consensus policy and the strong involvement of different interest groups in the policy decision-making processes, the idea of SD as a holistic policy concept fell on fruitful ground. Sweden built up the SD discourse on experience derived from earlier approaches, which indicated that it is possible to combine SD with high levels of economic and social welfare . . . Sustainable Development seems to be a logical next step” (Ahlberg 2009 : 175–176).
- 13) Poloni-Staudinger (2008) poses a very interesting and intricate question of whether consensus democracies are more environmentally effective than other types of democracy (notably adversarial democracy). He then asserts that what is decisive is not a particular type of democracy per se, but rather the nature of issues at stake, types of political institutions, and the extent of influences made by green parties. The empirical investigation to this question is far from certain partly being complicated by methodological difficulties as well. Much more further research will be needed.
- 14) One official commented that this bipartisan support presents a sharp contrast to different views by different parties toward, for instance, the role of public ownership of land (interview, city of Stockholm 12 August 2011).
- 15) According to Johansson (2006), even if LIP was provided to a wide range of activities, on average the marginal CO₂ reduction is between SEK 0.02 and 0.09 per kilogram CO₂ in 72% of the projects which had some components of CO₂ emission reductions. This is a low cost subsidy compared with CO₂ tax.
- 16) Baker and Eckerberg (2007) provide more cautious interpretation about the figures related to job creation, because it is not entirely clear how many of these jobs are newly created and it is also not surely assessed whether these jobs might have been created even without LIP support (p.332).
- 17) This information was made available by my visit to NATURVÅRDSVERKET, SEPA on 10 August 2011.
- 18) While it is beyond the scope of this article to discuss Stockholm, it is also well known as a green city. For See for example Larsen et al. 2011 and OECD 2013.
- 19) In 1996 a new equalization system for local governments was introduced.
- 20) [http : //wiserearth.org/organization/view/a660db031a4b0d1ee85ccfb454793445](http://wiserearth.org/organization/view/a660db031a4b0d1ee85ccfb454793445)
- 21) Personal interview with a long-standing member in Växjö, 25 August 2011.
- 22) My visit to the head office in Stockholm in 10 August 2011, and a personal interview in Stockholm, 14 August 2011.
- 23) Interestingly enough, this kind of acceptance is not applicable in South Africa for instance. Although the Natural Step works in South Africa, their representative explained that the economy in South Africa is an American type of pure competition, and as such, it is indeed very challenging to convince the business leaders there to adopt sustainability in their business agenda (interview 10 February 2012).
- 24) See their webpage of [http : //www.bth.se/ste/tmslm.nsf/pages/msls_home](http://www.bth.se/ste/tmslm.nsf/pages/msls_home).
- 25) There is a small but interesting Emigrant Museum in Växjö, whose website is [http : //www.utvandarnashus.se/](http://www.utvandarnashus.se/).
- 26) Interviews of key leaders in Växjö, August 2011.
- 27) The major consideration for the whole exercise include climate and historical changes in emissions ; smart transport, communication and community ; and energy transition and municipal buildings (SSNC website).
- 28) An interview with elected representative Vaxjo, 18 August 2011.
- 29) Generally, my interview with the mayor and councillors in Växjö confirmed that they were supportive of citizen participation in order to promote sustainability (interviews in August 2011). However, more research needs to be done how and why they came to be supportive as they gain experiences in consulting with local citizens and articulate sustainability with them ; as they hold the key position in representative democracy and party politics, there is certain tension between direct communication by citizen to authorities and the overall political system of liberal democracy. Karlsson (2012) illustrates that support by councillors to citizen participation tends to be high in pioneering local governments.
- 30) Bulkeley (2010) call them as “policy entrepreneurs” as those “who champion the issue, set agendas, and establish the basis for policy responses” (234).
- 31) He continued, “put differently, a kind of polarization between old-fashioned politicians and young and sometimes radical reformers was avoided here in Växjö. They did not fight about environment, but rather they engaged in more useful discussions” (Personal interview, 18 August 2011).

- 32) See <http://www.concerto-sesac.eu/>.
- 33) See <http://www.klimabuendnis.org/home.html>.
- 34) Personal interview with a professor at Linnaeus University, 22 August 2011.
- 35) Interview with elected representative Vaxjo, 18 August 2011.
- 36) The other well known example is Freiburg, Germany.
- 37) Although some of the official documents of the city of Växjö explain that it is one of the high-ranking cities where environmentally friendly cars are registered, my casual observation did not confirm high utilization of hybrid and electric cars.
- 38) For more about the related discussions, see Berglund and Matti 2006 : Jagers and Matti 2010.
- 39) In addition to economic benefits of new technologies centered around renewable energies, some political benefits in the form of increased influences on global issues such as climate change was also anticipated (Zannakis 2009).
- 40) Baker and Eckerberg went as far as saying that ironically, LIP, as a top-down centralized initiative focusing on material aspect, no doubt contributed to the demise of the bottom-up Local Agenda 21 (Baker and Eckerberg 2007 : 336).
- 41) Interestingly enough, Dryzek (2013) states that “the most prominent political configuration that currently looks at all feasible would feature a consensual corporatist state pursuing ecological modernization confronted by a lively green public sphere” (p.238). Although Dryzek refers only to Germany and Norway following this quote, this description appears to apply to Sweden as well.
- 42) It is also very interesting to note that in Sweden, capitalism and big universalist welfare state co-evolved through modern history. This combination is perhaps unique, in stark contrast to the United States where private corporations do not wish the big state to interfere into their business agenda. This unique historical legacy may help ease the transition to the future state of Sweden, which could be a step closer to the green state.
- 43) Torgerson (2008 p 22) makes a very valid point : “What liberal democracy has largely had to ignore, or discount as irrelevant, is democracy conceived as a form not only of government, but also of society. The stark inequalities of wealth in capitalist societies are clearly at odds with such a conception of democracy and thus throw into question the democratic character of liberal democracy.”

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