

Chapter 2

Evolution of Ecovillages: in the Context of the Environmental Movement

Twenty-odd years ago the idea of a Swedish ecovillage was deemed by many as featherbrained, odd, or hippie, but the idea has since blossomed into a movement. The movement and the ecovillages have matured, gaining respect and notoriety. Per G. Berg who has been involved in ecovillage planning for over ten years cites from his research that, “Over 50,000 Swedes have voiced interest in eco-villages as an alternative to the stresses and isolation of typical modern society”(Walljasper 143). The movement has benefited from, and contributed to, the larger national ecological movement. It raises questions about the quality of life we want for ourselves and for our children.

As the ecovillages matured, growing pains were inevitable. The first villages installed prototype systems which, invariably, had glitches. Dozens of projects were laid to rest because they could not find the financial or administrative backing needed to follow through. Citizens involved in the planning of Solbyn ecovillage were dismissed as “impractical, vegetarian, hippies” when they first approached city officials in 1979. Since they did not have the backing of an established developer no “self-respecting” financial institution would more than glance at their loan application. By 1990, Malmö - the city twenty miles southeast of Solbyn - jumped on the bandwagon and wanted to build their own ecovillage. To stave off the flood of requests for information, the major government agency on housing and planning, Boverket, felt it necessary to develop a definition and guidelines for ecovillages. This was a watershed moment. This action by Boverket legitimized

the building of ecovillages. Ecovillages were not on their own anymore.

This maturation did not occur in isolation. It also reflects a worldwide trend in environmental consciousness. Sweden has been actively pursuing environmental conservation for decades, not just locally, but on a national and international scene. The Swedish Environmental Protection Agency was established in 1967. In 1972 Sweden hosted the first international conference on the environment. Swedish citizens have also been active on the environmental front founding an array of grassroots environmental organizations. The interplay of these factors has propelled Sweden into its position today as one of the most environmentally friendly nations in the Western world. Although, I must note, there is still much to be done to shore up environmental resources.

The ecovillage movement influenced, and was influenced by, multiple levels: global, national, local, and personal. The history of ecovillages is incomplete without an explanation of the background in which it has evolved. International events may seem, at first, to be far removed, from something such as haggling over the price of a solar panel, but the two are connected. Each cog in the wheel is important. One missing part can alter the function of the whole wheel. The interrelated nature of different levels of change in the environmental consciousness can be illustrated, for example, by the 1992 UN conference on the environment. Swedish representatives returned from Rio de Janeiro with an action program, “Agenda 21.”

The successful implementation of Agenda 21 required national, local and grassroots action. Many grassroots initiatives received government support as a result of Agenda 21 programs. This support helped the initiatives improve and expand their efforts. Five years

later, when Swedish representatives went to attend the Earth Summit +5 UN conference, they had a book full of success stories with them.¹ More than one of these successes can be traced directly, or indirectly, to progress made by the ecovillages. Sweden's local successes, shared at the UN conference, help to raise the international standard of expectations for progress towards sustainable development. Without the high standards and commitment of individuals on a grassroots level, Swedish representatives would have had only empty promises to share with the international community. A similar type of interrelation applies to the building industry. The insistence of individuals and ecovillages to prove the quality and efficiency of new ecological products and systems, eventually gained enough clout to raise the national building standards. These standards were also influenced by national legislation. The higher standard for insulation, for example, soon raised the minimum standard for insulation which paved the way for the pioneers to push the ahead, experiment, and raise the standard again.

The following milestones either directly, or indirectly, supported the cause of the ecovillage movement. The events paint the background for the evolution of ecovillage planning and design. It is neither an exhaustive list, nor is it intended to be a historical review of the environmental movement. Many of the events such as the oil crisis, or Chernobyl, were catalysts for a shift of public opinion in favor of environmental protection. Increased support for environmental concern, contributes to the acceptance of, and interest in, the advancement of grassroots interests.

Milestones for the ecovillage movement:

1963 - *Silent Spring* by Rachel Carson

First published in the US in 1962, and in 1963 in Sweden, Rachel Carson's book exposed the dangers of pesticides to the environment, and warned of a 'silent spring' when no birds would survive to sing. United States Vice President Al Gore cites in his 1994 introduction to the book, "the publication of *Silent Spring* can properly be seen as the beginning of the modern environmental movement (xviii). The [US] Environmental Protection Agency was established in 1970, in large part because of the consciousness that Rachel Carson had raised (xx)." Her book had a similar consciousness raising effect among the public and legislators in Sweden.

1967 - Establishment of Naturvårdsverket, the Swedish Environmental Protection Agency

Previous Swedish governmental measures in environmental protection were limited to nature conservation. The establishment of Naturvårdsverket marked the beginning of government efforts to control and prevent pollution. A slew of environmental measures were passed in the late 1960's "These measures often had rapid, dramatic results. Since the late 1960's, sulfur dioxide emissions from sources in Sweden have fallen by 75%, the release of mercury into waterways has dropped by nearly 100% and emissions of carbon dioxide by one third."²

In the mid-1990's Naturvårdsverket identified thirteen areas of fundamental importance for protection of the environment. These serves as the basis of Naturvårdsverket's action plan for the 21st century. Many municipalities have adopted action plans based on these 13 areas. The areas are as follows:

- 1) Gases effecting the earth's climate
- 2) Depletion of the ozone layer
- 3) Acidification of soil and water
- 4) Photochemical oxidants and ground level ozone
- 5) Urban air pollution and noise
- 6) Euthrophication of seas, lakes and inland waterways
- 7) Metal pollution
- 8) Organic environmental poisons
- 9) Generation and dissemination of new, synthetic organisms
- 10) Natural resources and nature conservation
- 11) Utilization of bedrock, gravel, peat and minerals
- 12) Exploitation of land and water for housing, industrial plants and infrastructure
- 13) Waste and hazardous residues

Each of these areas is impacted by industry and individuals' behavior.

1967 - Establishment of Boverket, the Swedish National Board of Housing, Building and Planning.

Boverket is a national government agency in the field of housing and the environment. The Board's main responsibilities are the built environment and the management of natural resources, physical planning, building and housing. It serves to promote the effective and uniform application of regulations and subsidy systems. In the last few years, Boverket has taken an increasing interest in environmental concerns. It has funded research, seminars, projects and publications on the subject.

1972 - Stockholm Conference on the Human Environment

Sweden hosted the first international conference

on the environment. It was at this conference, that the United Nations Environment Program (UNEP) was founded. "UNEP was established as the environmental conscience of the United Nations system, and has been creating a basis for comprehensive consideration and coordinated action within the United Nations on the problems of the human environment. The mission of the UNEP is to provide leadership and encourage partnerships in caring for the environment by inspiring, informing and enabling nations and people to improve their quality of life without compromising that of future generations."³

1973 - First oil crisis

Long lines, high prices, and rationing of gasoline, focused public debate on energy use and energy conservation.

1974 - "The Well Balanced Village" - Department of Interdisciplinary Studies - Göteborgs universitet

Researchers at Göteborgs universitet were interested in examining how to reduce resource consumption. A primary concern was that the individual family was not able independently, to influence systems which encourage inefficient use of resources. The result of their study was the report titled "Den Välbalanserade Byn" - The Well Balanced Village (Olsson). The village, they reported, would incorporate all aspects of life. In the village there would live approximately 800 people who knew each other reasonably well. Most people would work or go to school there. There would be businesses, food production, transportation, health care and more. Resource and energy consumption would be low and come from renewable sources. This report could be considered the first sketch for the first Swedish ecovillage. The ideas generated from

this project were instrumental to the development of the next project; Vällsviken.

1976 - Vällsviken - report on the first ‘almost’ ecovillage in Sweden

In 1974, scholars at the University of Gothenburg decided to pursue the “Well Balanced Village” concept to another level. The group wanted to study the development and execution of a democratic planning process in a new, resource-efficient, housing development. The hope was to complete the project, building Sweden’s first ecovillage. They contacted municipal officials in the city of Karlstad and explored the options available in the current market. Study groups were formed to research all aspects; the economic, social, legal, scientific, and technical aspects of the building’s structure and function. The report, published in 1976, (Olsson) addresses all aspects in great detail including: diagrams, an outline building and site design, natural features of the site and much more. Over the 5 years of planning of Vällsviken more than 100 Karlstad residents took part. The project was eventually laid to rest when the developer pulled out. Three families who had joined the Vällsviken project in 1977, joined a new ecovillage association, Tuggelite, and have lived in Tuggelite ever since.

1980 - Sweden votes “no” to nuclear power

A nuclear accident at Three Mile Island the United States had a large impact on Sweden’s energy policy. Soon after this event, Sweden announced a referendum on the future of its nuclear power program, which was held in March of 1980.⁴ Swedish citizens voted “no” to nuclear power. The parliament agreed to proceed with the complete phase-out of nuclear power by 2010, at the latest. In 1991, the parliament confirmed that decision. By 1996, no reactors

had been shut down and it is still uncertain when the phase-out will actually occur. Twelve nuclear power reactors were opened between 1972-1985, providing Sweden with electricity for up to 50% of its demand.⁵

1984 - Tuggelite - first finished ecovillage in Sweden

Tuggelite, in part a rebirth of the Vällsviken project, was completed in September 1984.

(Two other ecological housing projects, Rumpan and Drömsjö - sometimes referred to as ecovillages - were built before Tuggelite. Rumpan is comprised of summer homes. Drömsjö was built in conjunction with a school.)

1986 - Establishment of Njord

Njord, also known as Eko-Njord, is a national ecovillage association. It’s two primary goals are; first, to serve as a source of information and contacts for those interested in ecovillages; and second, to promote the development of one or more ecovillages within commuting distance of Stockholm. In 1988, 1989, and 1990, Njord organized conferences held in Stockholm. There were many inspirational speakers experienced in ecological design. These conferences provided needed legitimacy and publicity to ecovillage projects. Njord continues to organize seminars, maintain a list of existing and proposed projects, and produce a quarterly newsletter.

1986 - Chernobyl nuclear accident in the Soviet Union - April 26

“The Chernobyl accident completely changed the public’s perception of nuclear risk, “ according to the OECD Nuclear Energy Agency. The contamination in Finland and Sweden was especially high due to a Northwesterly wind shortly after the accident. The plume of

radioactive material was detectable as far away as Japan and North America. Many animals in Sweden, especially reindeer and sheep, had to be slaughtered immediately due to their high levels of contamination. Restrictions on slaughter and distribution of sheep and reindeer are still in force; 13 years later.⁶

1987 - The World Commission for Environment and Development defines sustainable development in the Brundtland Commission Report, “Our Common Future”

Sustainable development is a term often used, but seldom understood. Sustainable development is more of a dynamic process adapted to preexisting local conditions, than a unilaterally applicable and defined course of action. However, some sort of standard measurement was necessary to facilitate an international environmental debate. The definition of sustainable development found in the Brundtland Commission Report is one of the most frequently cited. The definition is sufficiently ambiguous to be open to a wide array of interpretations, some of which are more environmentally friendly and humane than others. Nonetheless, the definition was an important milestone for world politics establishing, at least on paper, that the earth’s capacity and durability is limited and acknowledging the need to set outer limits for human production and expansion.

“Sustainable development: development that meets the need of the present without compromising the ability of future generations to meet their own.”

1990 - Boverket, the National Board of Housing, Building and Planning, holds a seminar to

establish guidelines for an ecovillage.

Boverket’s interest in defining a standard for ecovillages provided legitimacy for ecovillages and ecological building.

1989 - Fall of the Berlin Wall

The fall of communism in Eastern Europe opened up lines of communication between East and West. Trans-boundary environmental concerns, such as air and water pollution, were impossible to address prior to the opening of Eastern Europe.

1992 - Earth Summit, the UN Conference on Environment held in Rio de Janeiro

The Rio conference has strongly influenced Sweden’s environmental policy. The principles laid out in the Rio Declaration and Agenda 21 - a global action program for sustainable development - have been integrated into national policy. Agenda 21, as described by the UNEP, is a 40-chapter document which comprises “the framework for activity into the 21st century addressing the combined issues of environment protections and fair and equitable development for all.”⁷

Agenda 21 goals are to be implemented primarily through democracy and grassroots action, adapted to the means of each nation and locality. Agenda 21 campaigns in Sweden emphasize the role of the individual, of organizations, businesses and municipalities. Each of the 288 municipalities in Sweden has adopted an Agenda 21 policy.

Agenda 21 represents an important shift in environmental policy from regulating industrial pollution to encouraging individual responsibility. An individual can no longer, in good conscience, say, “it is not my problem.” National policy, municipal policy and commercial campaigns,

now point to the individual and say, “yes, it is your problem, you can make a difference.”

1997 - Earth Summit + 5

The Earth Summit provided a chance for governments and organizations to take stock of their progress, or regression (depending on the nation), since the Rio conference. Sweden invested a great deal of effort to prepare for Earth Summit +5. The Agenda 21 programs were showcased in a book published by the Swedish EPA. A Swedish Agenda 21 Internet website⁸ has dozens and dozens of examples of municipal programs and of Agenda 21 success stories.

Evolution of Ecological Housing

The evolution of ecological housing correlates with the increasing national focus on the environment and the increasing focus on the role of the individual in environmental consciousness. In the 1970's, and well into the 80's, finding information about, and products for, ecological design was challenging. Pioneers on all levels, in all fields, have paved the way for the explosion of ecological discussions, products, and advancements seen in the last 3-6 years. Although the 1970's are often associated with the environmental movement, it could be said that the 1990's is the true green decade. Environmental consciousness began to shift from a status of 'passing trend' to 'a way of life'. By 1991, fifty percent of persons polled during the election campaign said the environment was a very important issue.⁹ *“In the last four to five years the environmental movement has swung from pioneer projects to daily environmental awareness among many. It [ecovillages] is no longer strange,”* observed a resident of ecovillage, Mjölntorpet. This shift in

popular opinion is especially apparent in the trend in ecological housing. Figure 1 shows the phenomenal increase in all types ecological housing projects between 1990 and 1996. But why did it take so long for the popularity of ecological housing to take off? The technology and techniques for ecological building have been available for decades. The lag between the availability of ecological building technology and subsequent burst of ecological building activity, can be explained by three factors. First, it takes time for new products and new expertise to grow sufficiently to become affordable for a wider consumer base. Second, the turnover time for housing is much slower than for consumables such as organic milk or even an electric car. The decision to buy a new home is not taken lightly. A major purchase, such as a home, involves countless factors, in addition to the consideration of environmental impact, not the least of such considerations is financial. Third, public opinion does not change overnight. Many humans resist change whether they be builders, business people, or any others. It follows that the building industry would be resistant to change. However, clear signs of change are now emerging.

Evolution of ecovillages

The Global Eco-village Network introduces the international history of ecovillages as follows:

“It is hard to say definitely where and when the first eco-village was set up because most of the long-established communities in the movement were originally founded for reasons largely unconnected with environmental sustainability. For example, the Icelandic eco-village, Solheimar, was set up in 1930 by a group inspired by the teachings of Rudolph Steiner and although care for the environment was always important to those living

there, it was not their driving force. Much the same can be said about The Farm, which was established in Summertown, Tennessee, in 1971, and the Findhorn community in Scotland which began in 1962. Perhaps the best claim to be the movement's pioneer is Crystal Waters in Australia. Planning work for this, "the world's first permaculture village", began in 1985."¹⁰

The above-mentioned villages are far less conventional and have a much greater degree of self-sufficiency than those in Sweden. The ecovillages in Sweden may not be as radical or self-sufficient, but this can be seen as an advantage. The Swedish projects may be founded on dreams, but their execution is practical. Ecological projects which make a more radical departure from the status quo, either ecologically,

socially, or spiritually, have been successful in their own right, but these projects have not held the interest of the general public, nor have they caused pause in the building industry (as discussed earlier in this chapter). As society starts to catch up with the ecovillages, future villages can and have progressed to the next level; breaking new ground.

The ecovillages in Sweden have learned from each other, and later projects have benefited from the increase in interest in ecological building. I cannot claim that no project has repeated the errors of preceding projects, they have, and new problems crop up along the way. However, a trend of positive change can be observed. Two trends exist; a technical trend and a trend of movement from utilitarian concepts to quality of life. The technical trend is easily explained as follows: As more products for ecological building became available,

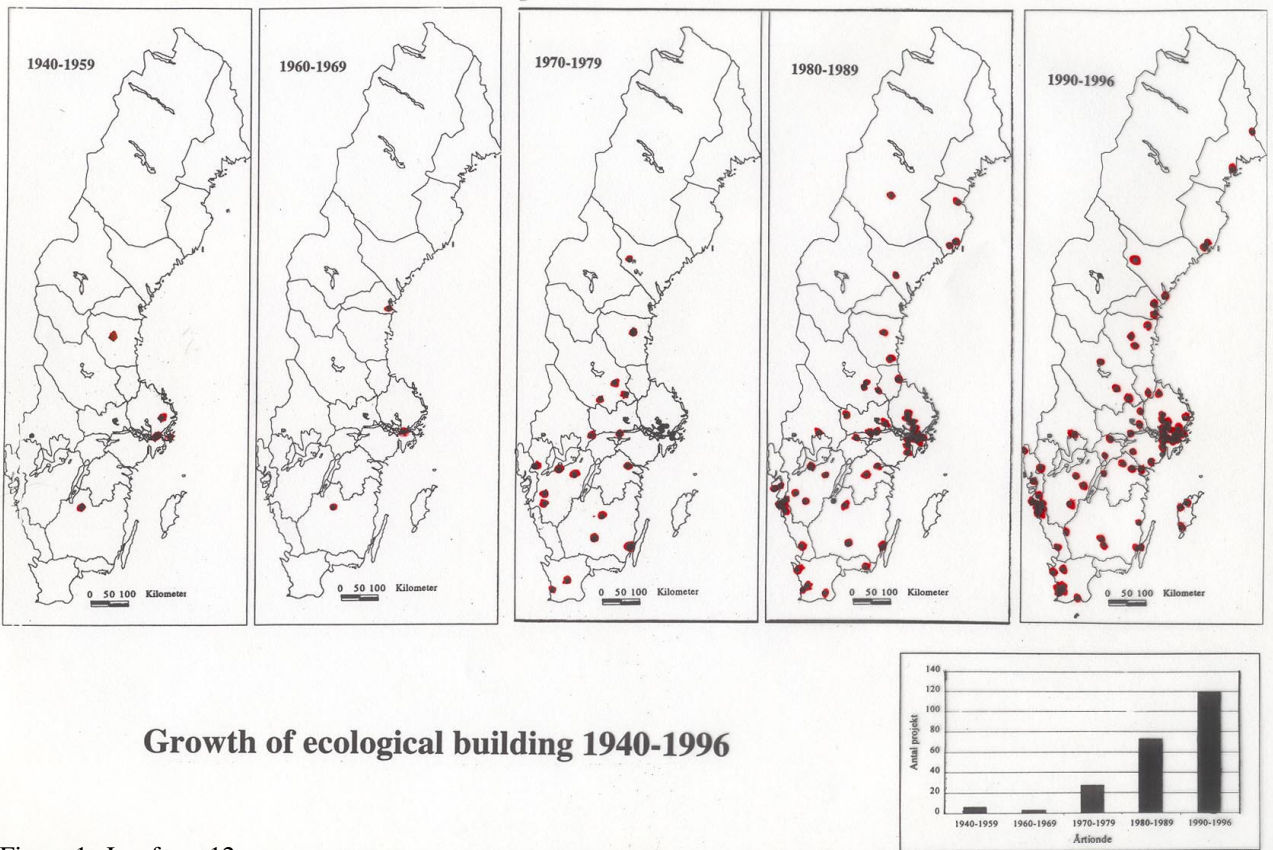


Figure 1. Josefson, 12.

the projects obtained increased choice and improved merchandise. There were also more persons with knowledge and experience to install the products. The first projects put energy conservation ahead of all other considerations. Other concerns were soon incorporated such as: the energy incorporated in the production, use, and disposal of a material (see discussion of life cycle energy in part II, design, ecological building) and its accompanying environmental impact within the ecosystem and on the user, especially in relation to allergies. (see discussion of allergies in part II, design, ecological building). Technical advancements coincide with the second trend from utilitarian to aesthetic considerations.

The second trend, towards increased consideration of aesthetics and quality of life is more difficult to quantify but easily seen in the pictures in the section on case studies. The first villages, Tuggelite and Solbyn were very utilitarian in design. Energy conservation measures in these two ecovillages came before an interest in the appearance and ease of use. Hundreds of ecovillage hopefuls visited these two villages, and drew their own conclusions. By the time Åkesta and Bålarna were built, the floor plan of the houses was made more open and spacious. Other small touches, some of which were sacrifices of energy efficiency, were incorporated into the plans for Åkesta, Bålarna, and later ecovillages, purely for appearance. (Not all of the details were for the sake of appearance. The housing market took a turn for the worse in the early 1990's. Energy conservation measures employed in Tuggelite were prohibitively expensive by the time the other ecovillages were built. See the chapter on Economics.) The emphasis on interior aesthetics is very clear in Smeden. The front rooms have high vaulted ceilings and an abundance of windows. Natural light is plentiful.

An example of improved ease of use is to make the compost from the toilet easily accessible, and therefore, more pleasant for the residents to attend to.

At Understenshöjden, finished in 1995, the members involved in planning were extremely interested in enhancing quality of life through appearance and ease of use. Windows were chosen with great care for their ability to let in light and bird song. The windows open inwards making them easier to clean. The kitchen has a user-friendly recycling space (The best recycling storage solution I have seen thus far). The interior paints were chosen for their warm colors. Landscaping was given close consideration. The little details of the design make living in houses more pleasant and easier to use. A more user-friendly and pleasant environment can furnish residents with more time and energy to devote to other matters.

Hågaby, a village currently under construction in Uppsala, marks the expansion of another potential trend towards building for a better quality of life. It will come closer to a "full-featured" settlement than any other ecovillage has. Hågaby is being built in cooperation with an existing neighborhood. This fact has dramatically increased Hågaby's pool of resources. This new village will have an organic restaurant, office space, a convenience store, a private elementary school and ball field, all within a five minute walk from the front door. Hågaby marks the beginning of a third generation of Swedish ecovillages. The early projects could not implement all their ideals without a concurrent evolution in society at large. Now that there has been a national shift in environmental values, the third generation of ecovillages will be able to move that much closer to the ecovillage ideal.

The evolution of ecovillage design happened incrementally, each project working to build on the

