

The life cycle perspective – a matter of accountability

– Working on environmental issues requires knowledge from a holistic perspective

This example comes from the municipality of Sollentuna, north of Stockholm, Sweden. It shows how the life cycle perspective can help an organisation to set the right priorities in their climate and environmental work. Thanks to a life cycle assessment, the municipality was able to find new areas for improvement and optimise its priorities.

The Municipality of Sollentuna had the Swedish Defence Research Agency (FOI) conduct an overall life cycle assessment, followed by an in-depth analysis by the environmental consulting company Miljögiraff. The analyses found several areas with the potential to reduce the municipality's impact on climate and the environment. One area that the results particularly highlighted was the significant impact of the municipality's food consumption. According to the Swedish EPA, the amount of food that Swedes throw away corresponds to about 3%¹ of the nation's total emissions of greenhouse gases, and about 50% of the food waste from industrial kitchens could be avoided.²

1. Swedish EPA, 2015: <http://www.naturvardsverket.se/Miljoarbete-i-samhallat/Miljoarbete-i-Sverige/Uppdelat-efter-omrade/Avfall/Avfallsforebyggande-program/Matsvinn/> (updated 2015)

2. Swedish EPA, 2014, Food waste volumes in Sweden, 2012

Located just north of Stockholm, the Municipality of Sollentuna is home to about 70,000 people and an employer of 2,725, half of them teachers. Politicians and officials in the municipality have noted that the residents have been increasingly demanding greater emphasis on environmental and climate change issues. Due to the need to conserve resources, such as time and money, the municipality wanted to make sure to prioritise the right areas by working to identify those with the greatest potential for improvement. Sollentuna is an inspiring example, because the life cycle perspective gave the municipality good guidance in working with priorities. The life cycle assessment gave them a good overall picture of the municipality's environmental and climate impact, which they were able to translate into a priority list.

We met with Malin Möller, climate and environmental strategist in the Municipality of Sollentuna, to learn more about the municipality and its focus on the life cycle perspective.

“In terms of time, money and resources, we can't do everything at once; life cycle assessments helped us to focus our efforts in the right direction.”

How does your municipality apply the life cycle perspective?

- We started by carrying out a preliminary study on life cycle concerns in 2012, in which we evaluated our impact based on a life cycle perspective so that we could include aspects outside our direct influence. That study gave us such interesting results that we wanted to take it a step further with a more in-depth assessment, which was completed in the summer of 2014. Since then, these studies have been complemented by detailed studies at a school, a pre-school and an assisted-living facility.

How did you come to be involved with the life cycle perspective?

- Initially it was a political incentive, as the advisory council for Sweden's environmental and climate work (Sveriges miljö- och klimatberedning) began developing a climate strategy in 2010 that will affect all of the municipalities. They began by looking at climate impact and analysing it from a life cycle perspective. Some gaps were identified, and we could see that it was not enough to simply look at the impact of the municipality's own operations. We realised the necessity to study impacts from a life cycle perspective.

In addition, the citizens are increasingly demanding a focus on climate and the environment, and the politicians want to win voters. According to the latest national survey, water issues are the highest priority for citizens, but they're also interested in reducing climate impact. In terms of time, money and resources, we can't do everything at once, so the life cycle assessment helped us to focus our efforts in the right direction.

Is the life cycle perspective linked to any specific department, or does it permeate the entire organisation?

- In November 2014, the municipal council passed an environmental policy, and the proposal it was based on comes from the knowledge we gained through the life cycle assessments. One of our focus areas in it is 'consumption', which applies to everyone in the municipality. We also conducted environmental training for all municipal employees. The training is linked to our own environmental policy, our impact and what we must do to achieve our goals.

How has the life cycle perspective advanced environmental issues?

- Food, electricity, heating, transport and computers are

our top five list of priority areas. Food and computers were not a focus in the past, but the life cycle assessments pointed them out as important areas. And as regards food, the life cycle assessment is the reason that our 2015 budget was expanded to further develop the issue and to reduce the municipality's climate impact due to food consumption in the public sector. The reports also gave us a greater understanding and awareness of these issues, and an understanding that we do have an impact outside of our 'own horizon'.

What concrete changes have you made as a result of the life cycle perspective?

- We have a project in which teachers, school kitchens and pupils work together to enhance our understanding of the impact of food and food waste. We've created educational videos on food waste for school children. In addition, we're going to arrange a competition between schools on the theme of food waste and look at the possibility of financial incentives for schools to reduce their food waste.

Do you have an example of a life cycle based change that has led to reduced environmental impact?

- We have two examples that in many ways originated from the life cycle report, although not solely from it. As always, there are many factors that lead to new regulations. For example, the food issue has received extra budgeting based on the life cycle assessment. We've also looked into our computers, which the report told us had a significant impact. We have reduced the strain on our computers' capacity and thus enhanced their lifespan, and this has already been implemented in our schools.

"If we hadn't had a good understanding of the big picture, we would have focused on electricity, heating and some traffic emissions, but we might have missed the food aspect."

What do you see as the greatest incentives for enhancing your municipality's life cycle approach?

- It's our responsibility as a municipality. We are a part of the nation's environmental impact and that is one of the five focus areas of the municipality. We've developed the knowledge and now the politicians are asking for it. To work on this focus area, you need to be aware of your impact, and the life cycle perspective is the foundation. Half of our employees are teachers. If they in turn convey a sustainability mindset to their pupils, who perhaps go home and talk to their parents, there might be a strong ripple effect.

What tips do you have for others to get started on or further develop their work on life cycle perspective?

- One thing is to think outside the box, but above all, to carry out a life cycle assessment to learn where you really are impacting the environment so you're working with the right things. That prevents sub-optimal solutions and creates greater faith in your abilities. If we hadn't had a good understanding of the big picture, we would have focused on electricity and heating and some road traffic emissions, but we might have missed the food aspect.

There is a value in starting, even if you don't know yet whether it will be a long-term or short-term effort. And bring in external expertise if you don't have it among your staff. A life cycle assessment is a big undertaking, you have to understand the methods, set the right delimiters and so on. It would be exciting if a general database and model for municipalities were drawn up, since municipalities tend to be fairly similar.

Will you continue to apply the life cycle perspective?

- Yes, in concrete terms we will demand reporting of climate impact in connection with land sales just to create awareness. A primary objective of the environmental programme is to bring about an overall reduction of climate impact per resident, and this should be assessed every five years.

Contact

Malin Möller, Climate and Environment Strategist in the Municipality of Sollentuna, malin.moller@sollentuna.se

Interview 8 September 2015: Johanna Spångberg, researcher at the Swedish University of Agricultural Sciences (SLU).

Text and layout: Rebecka Hallén Jorquera and Anna Wikström, project managers at the Swedish Life Cycle Center; Hugo Gustafsson, communication officer at the Swedish Life Cycle Center.

This article is part of the project entitled: Good examples – Inspiration for energy efficiency through the entire value chain, which was carried out with funding from the Swedish Energy Agency. You can find out about additional examples of applied life cycle thinking, read more about the Municipality of Sollentuna's work on climate change or learn more about the life cycle perspective via these links:

[Municipality of Sollentuna's work on climate change](#)
[More examples of applied life cycle thinking](#)
[Swedish Life Cycle Center](#)