



Environmental Programme 2017–2020

Region Västra Götaland operations
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Introduction

Region Västra Götaland is guided by Vision Västra Götaland – A Good Life and its remit is to ensure a good life for the people of Västra Götaland. The work involved in realising this ambition is conducted within three areas: Healthcare, Growth and Development and Public Transport.

The environment and health are strongly interlinked. The starting point for Region Västra Götaland's environmental work is to carry out preemptive work to prevent people from falling ill. The Environmental Programme is designed to promote good health and contribute to sustainable development through goals on low environmental impact, low levels of substances that are hazardous to the environment and health, and sustainable use of resources. Successful environmental work within our operating areas demonstrates that we are leading the way and is one of the basic prerequisites for pursuing a reliable and sustainable regional development programme.

This is the third Environmental Programme to be published for Region Västra Götaland. The Environmental Programme 2014-2016, which was adopted by the Regional Council, contained long-term goals through to 2020 (in one case 2030). Goals and measures for the period 2017-2020 have been produced based on goals, results and evaluations from the programme period 2014-2016. The long-term goals through to 2020 remain unchanged although in the Environmental Programme for 2017-2020, they have been defined in the form of a series of quantifiable goals and measures.

The Environmental Programme is divided into seven prioritised environmental areas: Transport, Energy, Products and Waste, Food, Chemicals, Pharmaceuticals, and Medical Gases. Under each goal, there is a list of the measures required for the goal to be achieved and the names of the committees and boards that are responsible for implementing those measures.

Goals and measures in the Environmental Programme are followed up each year on the Group level and in the Annual Report. Each administration and company is required to report the results of their environmental work based on their own internal environmental goals and on the goals and measures set out in the Environmental Programme that impact specifically on their operations.

The Environmental Programme covers all the administrations, companies and operating areas within Region Västra Götaland that work for and on behalf of Region Västra Götaland. Each administration and company must take into account the goals specified in its management system or separate environmental management system. The goals and measures in the Environmental Programme must be taken into consideration when strategic regional decisions are reached and in the consequences of those decisions.

Sustainable development and promotion of good health

A common element in all the work that is taking place in Region Västra Götaland is Vision Västra Götaland – A Good Life. A vision within which sustainable development and its three dimensions – economic, social and environmental – are consistently in focus.

From Vision Västra Götaland – A Good Life

Good health and work are important for a good life, as are access to education, good communications and culture. The water in our oceans and lakes should be of good quality and the air we breathe should be clean and healthy. Region Västra Götaland's remit is to contribute to a robust Västra Götaland in which people can live and develop. It should be a good place for future generations to grow up in.

Region Västra Götaland Environmental Policy¹

All work within Region Västra Götaland's operations should promote good health and contribute to sustainable development, where resource management and ecosystem adaptation are key features. We undertake to comply with laws and other stipulations. Through ongoing improvements, we will prevent and reduce negative environmental impact that affects our operations. We will be pioneers in environmental work, which will be pursued in a systematic and structured manner.

Region Västra Götaland's mission is to offer good healthcare and dental care and provide the conditions for good public health, a rich and varied cultural life and a healthy environment, as well as work, research, education and efficient communications. Successful environmental work within Region Västra Götaland's operations is one of the driving forces behind health promotion in Västra Götaland. A clean environment is necessary to safeguard people's health and well-being. The link between the environment and people's health is, however, very complex and difficult to evaluate. In Europe, the main environmentally related health risks are air pollution, both indoors and outdoors, poor water quality, poor waste management and hazardous chemicals. The resulting health effects include respiratory disorders, cardiovascular diseases, cancer, asthma, allergies, reproduction problems and impaired development². Environmental work contributes in many cases to reducing operating costs and generating positive socioeconomic effects in the long term.

To mitigate our negative environmental impact, Region Västra Götaland must meet four primary challenges: Reduced Climate Impact, Non-Toxic Environment, Sustainable Use of Resources and Biodiversity. These challenges are prioritised on the EU level³, on the national level⁴, and by other regions and county councils. The challenges are addressed in the Environmental Programme 2017-2020 through targets and measures in seven prioritised target areas for Region Västra Götaland operations.

Successful environmental work in Region Västra Götaland's operations is one of the prerequisites for being able to trustworthily and effectively drive regional development forward. The goals and measures set out in the Environmental Programme are clearly linked to several sustainable development programmes, particularly for circular fashion and sustainable environments, energy and bioinnovation, food and green innovation, and sustainable transport. The programmes are aimed at meeting the goals set out in the Strategy for Growth and Development in Västra Götaland 2020.

1 The Region Västra Götaland Environmental Policy will be adopted by the Regional Council along with the Environmental Programme

2 <http://www.eea.europa.eu/sv/themes/human/about-environment-and-health>

3 EU Environmental Management Programme, <http://www.europa.se>

4 Swedish environmental goals, <http://www.regeringen.se/>

Effective governance and cooperation

The Environmental Programme covers all the administrations and companies in Region Västra Götaland as well as operating areas that work for and on behalf of Region Västra Götaland. The goals and measures in the programme will form the basis for prioritisation in budget work, both on the central level and on the administration and company level. The goals and measures will also be incorporated into the procurement work that is taking place with external providers and will form the basis for future procurement and purchasing.

The fulfilment of the goals set out in the programme is founded on the assumption that administrations and companies cooperate. Certain committees and boards have primary responsibility for ensuring that measures are implemented and followed up. A committee or a board with ancillary responsibility must collaborate with the body that has primary responsibility for implementing the measures. Responsibility is defined in conjunction with the measures stipulated for each goal area. The table in Annex A contains an outline of the Region Västra Götaland environmental organisation and the overall allocation of responsibility for environmental work.

To assure effective guidance towards achieving the goals, clear leadership and a systematic improvement programme are required. This presupposes structured work on integrating the goals into the operational management systems, ensuring that the requisite expertise is available for implementation, follow-up and communication. The ensuing measures will form a basis for the environmental work that will take place within the different operating areas and will be followed up during the period.

Management system

A key element in achieving the goals set out in the Environmental Programme is that they are broken down and integrated into the management system of each administration and company, or in a separate environmental management system. This assures the work of the management regarding formulation of goals, allocation of resources, organisational follow-up and reporting. Operating areas and companies that have less environmental impact could, instead of using a management system, get an environmental diploma (smaller administrations and companies, as well as the *Närhälsan* local health system and dental clinics).

Travel policy

All employees and elected representatives must adhere to the Region Västra Götaland Travel Policy⁵, particularly with regard to reducing travel by car and air.

Purchasing/procurement

A large proportion of Region Västra Götaland's environmental impact arises from the consumption of products and services. This impact can be reduced by ensuring that the Environmental Programme is included in supporting documentation when Region Västra Götaland's needs are defined prior to procurement, that clear environmental requirements are laid down in conjunction with procurement, and that these requirements are followed up during the agreement period. Certain procurements are of major significance for the achievement of the goals in the Environmental Programme. The project groups responsible for these procurements must have assured environmental expertise. In those cases where there is a choice between an environmentally adapted product and a conventional product, it is the responsibility of each administration and company when placing orders/making purchases to request the best environmental choice from the range available. The Regional Executive Board is responsible for clarifying in the ordering system⁶ exactly which are the best environmental choices.

⁵ Reference number RS 2016–02451

⁶ At present use is made of the *Marknadplatsen* system

Financial investments

Region Västra Götaland investments must take place in compliance with the financial guidelines issued by the Regional Council⁷. These include documents dealing with responsible investment, where, among other things, the choice of investment must be based on three key criteria: ethics, environmental considerations, and avoidance of investment in companies whose primary operations involve the extraction of fossil fuels.

Communication

To promote transparent and effective environmental work, effective communication within Region Västra Götaland is vital. All operating areas are responsible for communicating their environmental work within their own area and playing an active part in an exchange of experience with other operating areas. The Group Office has specific responsibility for communicating the results that emerge from this centrally coordinated work.

Knowledge and skills

Each committee and board is responsible for ensuring that employees and elected representatives have the requisite knowledge of how environmental work within the administration is conducted. All employees and elected representatives are offered basic online environmental training by the Group Office. Each administration and company is also responsible for ensuring that employees whose duties give rise to significant environmental impact receive adequate training.

Follow-up and reporting

Goals and measures in the Environmental Programme are followed up annually on the Group level in the Annual Report. The Group Office issues reporting instructions and is responsible for collating the results. Each administration and company must report on the results of their environmental work, based in part on the operating area's own environmental goals and in part on the goals and measures in the Environmental Programme that affect them. The Environment Committee is responsible for the follow-up of the Environmental Programme in the Annual Report and for presenting proposals for possible remedial action to the Regional Executive Board.

7 Reference number RS 2731–2015



Transport

Introduction

Around 80 per cent of Region Västra Götaland's carbon emissions⁸ derive from transport, including public transport.

By 2050, Sweden will be a country without net emissions of greenhouse gases⁹. Sweden's road vehicle fleet will be independent of fossil fuels by 2030 and will thus emit 80 per cent less carbon dioxide compared with the base year, 1990¹⁰. The same applies in the Climate Strategy for a Fossil Fuel Independent Västra Götaland 2030. Transport in Region Västra Götaland will be independent of fossil energy by 2020 and will have reduced its carbon emissions by 80 per cent compared with the base year, 2006. To achieve an 80 per cent reduction in emissions, transport needs to switch to electricity and renewable biofuels that offer superior climate performance.

The Region Västra Götaland goal of becoming independent of fossil fuels includes transport over which the organisation has control in the form of full ownership (or leasing) or a significant impact via procurement (public transport, freight transport for assistive aids, materials and textiles, as well as ambulances and patient transport service vehicles). In addition, Region Västra Götaland operations generate climate impact from transport over which they do not have full control (such as other transport agreements, suborder-governed transport operations and transport linked to a specific service¹¹), but where the organisation can reduce the climate impact by imposing environmental demands as part of the procurement process.

The organisation's climate impact also includes business travel and travel by employees to and from work. To reduce the resulting climate effects, Region Västra Götaland employees and elected representatives must travel in accordance with the current business travel policy and guidelines. According to the Travel Policy, the Climate Change Programme means even clearer guidance away from travel by private car and by air. Region Västra Götaland must make it easier for employees and elected representatives to travel more sustainably.

Long-term goal

Region Västra Götaland transport operations will be fossil free and energy efficient

Goal 2020

1. Region Västra Götaland transport of people and goods¹² will become independent of fossil fuel-based energy by reducing carbon emissions by 80 per cent from 2006
2. Region Västra Götaland transport of people and goods¹³ will be energy efficient

Follow-up, goals 2020

The goals are followed up using the following core indicators:

1. Public transport: g CO₂/person km; Freight transport, assistive aids: kg CO₂/activity; Freight transport, materials and textiles: kg CO₂/truck; Passenger cars and light trucks: kg CO₂/km; Ambulances: kg CO₂/km
2. Public transport: kWh/person km; Freight transport, assistive aids: kWh/activity; Freight transport, materials and textiles: kWh/truck

⁸ Apart from climate impact deriving from production and post-treatment of purchased goods

⁹ *Road Map: A Sweden without Climate Emissions 2050*, Swedish Environmental Protection Agency, 2012

¹⁰ In accordance with the enquiry *Fossil Fuel Independent Road Vehicle Fleet*, Government Offices <http://www.regeringen.se/rattsdokument/kommittedirektiv/2012/07/dir.-201278/>

¹¹ Such as food purchases

¹² Public transport, freight transport - assistive aids, freight transport - materials and textiles, passenger cars (leased and owned), light trucks (leased and owned), ambulances and land-based patient transport service vehicles. Even if there is a change in the ownership status of any of these modes of transport, they must continue to be included in the target.

¹³ Public transport as well as freight transport - assistive aids, and freight transport - materials and textiles

Measures

Goal	Measure	Primary responsibility	Support	Reporting
1.	Public transport must reduce its carbon emissions. Electric (fully electric vehicles or chargeable hybrids) or biogas-powered vehicles are prioritised in the first instance ¹⁴	Västtrafik Board	Public Transport Committee	Annually: g CO ₂ /person/km
	When new passenger cars and light trucks are procured, vehicles that run on renewable energy must be chosen. Vehicles that run on gas, chargeable hybrids and electric vehicles are prioritised ¹⁵	All committees and boards	Service Committee, Regional Executive Board	Annually: Vehicle fleet list arranged according to fuel type (compiled by Regional Service)
	Ambulances and land-based patient transport service vehicles must reduce their carbon emissions	Hospital boards	Regional Executive Board	Annually: Activity report
	Place and follow up requirements regarding fossil fuel-independent transport ¹⁶ . Electric vehicles (fully electric vehicles or chargeable hybrids) or biogas-powered vehicles must be prioritised in the first instance ¹⁷	Regional Executive Board	Service Committee	Annually: Results of demands made, follow-up and activities during the analysis and contract monitoring phase
	Use Region Västra Götaland's own transport ¹⁸ to a greater extent in regional development work in order to act as a forerunner.	Hospital boards, Västtrafik Board, Service Committee	Environment Committee, Regional Development Committee, Public Transport Committee	Annually: Activity report
2.	The use of energy by public transport must be reduced.	Västtrafik Board	Public Transport Committee	Annually: kWh/person/km
	Place and follow up requirements to reduce energy use in conjunction with procurement of transport ¹⁹	Regional Executive Board	Service Committee	Annually: Results of demands, follow-up and activities during the analysis and contract monitoring phase
Long-term goal				
	Demand renewable fuels in all transport procurements. Electric vehicles (fully electric vehicles or chargeable hybrids) or biogas-powered vehicles must be prioritised in the first instance ²⁰	Regional Executive Board and the Västtrafik Board	Service Committee	Annually: Results of demands, follow-up and activities during the analysis and contract monitoring phase

14 Where electric and biogas operation does not fall within reasonable economic boundaries, demands are imposed that will result in a reduction in carbon emissions of at least 80 per cent.

15 Depending on the geographical location of the operations, dispensation from the general aim can be granted by the Service Director.

16 Procurement of freight transport for assistive aids, materials and textiles.

17 Where electric or biogas operation does not fall within reasonable economic boundaries, demands are imposed that will result in a reduction in carbon emissions of at least 80 per cent.

18 In particular ferries and diesel-powered trains within the public transport system as well as ambulances operated by the hospital boards.

19 Procurement of freight transport for assistive aids, materials and textiles.

20 Where electric or biogas operation does not fall within reasonable economic boundaries, demands are imposed that will result in a reduction in carbon emissions of at least 80 per cent.

Energy



Introduction

Alongside transport, the three main components in Region Västra Götaland's energy use are heating, cooling and electric power in the Region's own properties. The property holdings that are managed by Västfastigheter have total floor space of 1.6 million square metres. Region Västra Götaland uses around 330,000 MWh²¹ each year, which is equivalent to the annual energy consumption of approximately 13,000 average detached houses/townhouses²². Property energy accounts for around 10 per cent of carbon emissions in Region Västra Götaland²³.

Switching to a more sustainable energy system not only requires better renewable energy sources but also more efficient energy use. The work being conducted within Region Västra Götaland is aimed in the first instance at minimising energy requirements. This is achieved by constructing energy-efficient buildings, improving energy efficiency in existing buildings, planning and investigating operational needs, and using smart, energy-efficient equipment. The energy source must be switched from non-renewable to renewable.

The Region Västra Götaland aim of achieving fossil fuel independence refers to the Region's own properties. However, total climate impact also includes operations in leased premises. Here there is less opportunity to exert an influence although Region Västra Götaland will work not only to reduce operationally related power use but also work to reduce energy use in the buildings together with external property managers.

Long-term goal

Region Västra Götaland energy use will be efficient and fossil free

Goal 2030

Region Västra Götaland will halve its energy use in its own properties and facilities by 2030 compared with 1995.

Goals 2020

3. Total energy use in the Region's own properties²⁴ will be a maximum of 170 kWh/m² usable floor space
4. Region Västra Götaland²⁵ will be independent of fossil energy and fuel by 2020 by reducing carbon emissions by 80 per cent using the figure for 2006 as a base figure
5. Region Västra Götaland will work to ensure that energy use will be considerably more efficient in leased premises

Follow-up of goals 2020

The goals will be followed up using the following core indicators:

3. Total energy use expressed in kWh/m² usable floor space, weather-corrected figures
4. Kg CO₂/m² usable floor space, figures not weather corrected
5. Energy and environmental performance in premises leased from an external party

²¹ Properties managed by Västfastigheter, the laundry facility in Alingsås and Västtrafik

²² <http://www.energiradgivaren.se/2011/09/elforbrukning-i-en-genomsnittlig-villa-respektive-lagenhet/>

²³ Does not include climate impact from production and post-treatment of purchased goods

²⁴ Västfastigheter's own property holdings

²⁵ Västfastigheter's own property holdings and premises owned by Västtrafik

Measures

Goals	Measure	Primary responsibility	Support	Reporting
3.	Work in accordance with the Action Plan to reduce energy use in the Region's own premises ²⁶	Property Management Committee	-	Annually: Energy use in kWh/m ² usable floor space
	Work to reduce operationally related use of electric power	All committees and boards ²⁷	Property Management Committee	Annually: Examples of improvement and deviations
4.	Work in accordance with the Action Plan to reduce carbon emissions from district heating supplied to the Region's own properties	Property Management Committee	-	Annually: kg CO ₂ /m ² usable floor space
	Use Region Västra Götaland's own properties ²⁸ to a greater extent in regional development work in order to act as a forerunner	Property Management Committee and the Västtrafik Board	Environment Committee, Regional Development Committee	Annually: Activity report
5.	Create a working method to collaborate with external property owners in order to focus more on energy and environmental aspects ²⁹	Property Management Committee, boards and committees that carry on operations in leased premises	-	Annually: Activity report

²⁶ Produce a relevant core energy indicator related to energy used in operations rather than floor space

²⁷ Each administration must appoint a person to be responsible for energy within its field of operations and who can represent the operating area in an energy issues forum in Region Västra Götaland

²⁸ Particularly with regard to solar power. Solar power production (kWh) that is practical will be investigated

²⁹ Where each party contributes based on factors over which they have control. The parties concerned are the property owner, Västfastigheter and the tenant (Region Västra Götaland operations)



Products and waste

Introduction

Region Västra Götaland purchases products and related services for its operations to the value of around 8 billion Swedish kronor annually. Each year, hospitals produce around 10,000 tonnes of waste. Around 700 tonnes of food waste are disposed each year, equivalent to approximately seven per cent of the total waste generated. Almost 60 per cent of the waste is sent for incineration. Different types of healthcare processes generate waste that is sent for incineration. An average hip replacement procedure, for example, requires around 5.7 kg of consumables.

In order to achieve sustainable use of resources, Region Västra Götaland has, as on the national level, aims to prevent the occurrence of waste by in the first instance reducing the need for materials and increase reuse and recycling. The focus in the Products and Waste target area is to manage common resources and by doing so reduce the volume of waste that we generate as well as our environmental impact and our costs.

Long-term goal

The use of resources within Region Västra Götaland will support sustainable development. The waste generated in Region Västra Götaland will be dealt with in a way that supports sustainable development.

Goal 2020

6. All prioritised product areas must support sustainable development. Prioritised product areas are:

- a) Construction materials
- b) Consumables
- c) Electronics
- d) Furnishing
- e) Food
- f) Textiles
- g) Waste generated by Region Västra Götaland

Follow-up of the goal for 2020

6. The goal is followed up using core indicators and qualitative assessment methods within:

- a) Construction materials: Reduce the volume of construction waste in conjunction with new construction and redevelopment
- b) Consumables: Reduce the need for materials. Increase the proportion of renewable³⁰ and sustainable raw materials
- c) Electronics: Reduce the need for materials. Electrical and electronic products have a relatively long lifespan and are to an increasing extent produced using renewable and sustainable raw materials
Furnishing: Furnishing are given an extended lifespan. When premises are vacated or new premises are created, as much of the furnishing as possible should be reused or redesigned. Furnishing that must be disposed, will to a greater extent find a new owner via TaGe or local pre-used furniture recycling systems. Alternatively, they are sent to be redesigned via established channels
- d) Food: Food waste will be reduced (measured in terms of grams per portion) and all food waste will be collected for the production of biogas and biofertiliser
- e) Textiles: Reduce the use of conventional cotton and increase the proportion of renewable and sustainable raw materials that have a lower environmental impact than cotton viewed from a lifecycle perspective.
- f) Waste generated by Region Västra Götaland: The volume of waste that is sent for incineration will be reduced. Waste that is sorted at source maintains a level of quality that maximises the actual degree of recycling

³⁰ The term 'renewable' means that the raw material comprises recycled material and/or material that comes from the air, ocean/water, forest or agriculture. Production, use and post-treatment of products should be sustainable from a social, environmental and economic point of view.

Measures

Goal	Measure	Primary responsibility	Support	Reporting
6a	Reduce the volume of construction waste ³¹	Property Management Committee	Regional Executive Board	Annually: Examples of improvements and deviations
6b, c, d, f, g	Place and follow up requirements in the procurement process	Regional Executive Board	All boards and committees	Annually: Results of demands, follow-up and activities during the analysis and contract monitoring phase
6d	Increase the lifespan of furnishing, choose redesigned/reused interior fittings instead of purchasing new furniture, work to ensure that furnishing that must be disposed of find new owners via TaGe and/or local pre-used furniture recycling systems, or are sent to be redesigned via established-channels	All boards and committees	-	Annually: Examples of improvements and deviations
6e	Reduce food waste from production kitchens and restaurants	Service Committee, boards of folk high schools and agricultural and natural resource high schools, Gothenburg Opera, Gothenburg Symphony Orchestra	Regional Executive Board	Annually: Examples of improvements and deviations g/portion
	Reduce food waste from the Region's operations and increase the sorting of food waste	All boards and committees	Regional Executive Board	Annually: Examples of improvements and deviations
6g	Prevent the occurrence of waste ³² and increase the quality of waste sorted at source	All boards and committees	Regional Executive Board	Twice yearly: waste from hospitals (collated by Västfastigheter) Annually: Examples of improvements and deviations

31 By, among other things, compiling a status analysis of construction waste, producing core indicators for follow-up, and producing an action plan to reduce construction waste

32 By, for example, repairing products and using products that are reusable



Food

Introduction

In the healthcare system in Region Västra Götaland, around 4.6 million meals are served each year. Agriculture, processing, distribution, packagings and waste management all have an impact on climate, from food production through to the emission of methane, nitrous oxide and carbon dioxide. Further environmental impact occurs in the form of eutrophication of lakes and watercourses as well as the use of insecticides that are harmful to the environment and health.

By choosing organic foods, you avoid the use of environmentally hazardous insecticides and their harmful effects on the environment and health, as well as genetically modified organisms (GMO). Specific demands are also made regarding animal husbandry, including the use of pharmaceuticals. Food processing must take place with the aid of selected processes that are not only eco-friendly but are also product-friendly and contain minimum additives, thus ensuring that use of substances that are foreign to nature are avoided. Phosphorus is an important plant nutrient and a finite resource and it is crucial that it is managed effectively. Seasonal adaptation, national dietary advice, climate-adapted choice of ingredients and a reduction in food waste will lower environmental impact and costs.

Long-term goal

Region Västra Götaland will reduce its environmental impact deriving from food purchases

Goals 2020

- 7. The proportion of organic food in 2020 will amount to 50 per cent³³ of the total food budget
- 8. Reduced climate impact deriving from the Region's catering facilities³⁴

Follow-up of goals 2020

The goals will be followed up using core indicators:

- 7. Proportion of the total cost of food that is spent on organic food, per cent
- 8a Climate impact per portion, hospital kitchens, kg CO₂ equivalents³⁵/portion
- 8b Climate impact per year, total volume of purchased food, kg CO₂ equivalents/kg purchased food³⁶

33 The Information Centre for Organic Products has adopted a new target for organic food: 50% organic in the public sector by 2020

34 Including all operating areas that have their own production kitchens

35 Carbon dioxide equivalents is a measure of the emission of greenhouse gases and takes into account the fact that different gases contribute to a varying degree to the greenhouse effect and global warming

36 Including all operating units that have their own production kitchen

Measures

Goals	Measure	Primary responsibility	Support	Reporting
7.	Replace conventional ingredients with organic ingredients, where maximum environmental benefit is achieved with minimum added cost	All boards and committees with their own food production and/or catering operations	Hospital boards	Twice a year: Report the total sum (in kronor) of food purchases and the sum of organic purchases and list the ingredients that have been replaced
	Systematic work to reduce the number of additives ³⁷ in the food	Service Committee	-	Annually: Examples of improvements and deviations
8.	Choose food with a lower climate impact	All boards and committees with their own food production	Environment Committee	Annually: Examples of improvements and deviations

³⁷ According to KRAV recommendations



Chemicals

Introduction

A large number of substances are included in the goods³⁸ and chemical products that are used by Region Västra Götaland. Certain substances can have a negative impact on the environment and human health, either individually or in combination. Manufacturing and post-treatment could also mean that people and the environment are exposed to substances that are harmful to the environment and human health.

The replacement of substances that are hazardous to the environment and health is therefore of major importance if we are to have a more health-promoting care system. This relates to public health, improved workplace environment and patient safety, along with protection of the external environment. The Chemicals target area has increased emphasis on avoiding and reducing the volume of additives in goods that are harmful to the environment and health.

Long-term goal

Region Västra Götaland will live up to the national goal of a toxic-free environment

Goal 2020

9. All prioritised product areas must contribute to a toxic-free environment. Prioritised product areas are
- Construction materials,
 - Consumables
 - Electronics
 - Furniture
 - Textiles
 - Play/educational materials
 - Chemical products and individual chemicals

Follow-up of goal 2020

9. The goal is followed up using core indicators and qualitative assessment methods within:
- Construction materials: In conjunction with new construction/redevelopment, increase the proportion of construction materials that are approved and assessed as "recommended" or "accepted" according to the BVB³⁹ (Building Material Assessment) criteria
 - Consumables: Increase the proportion of consumables that are subject to strict, assured⁴⁰ chemical criteria
 - Electronics: Increase the proportion of electrical and electronic products that are subject to strict, assured chemical criteria
 - Furnishing: Increase the proportion of furnishing that are subject to strict, assured chemical criteria. The proportion of sub-orders from the Green List for office furniture is 100% and in the case of environmental furniture⁴¹ at least 40% of the total volume purchased in kronor
 - Textiles: Increase the proportion of textiles with strict, assured chemical criteria
 - Play/pedagogical materials: Increase the proportion of play/educational materials that are subject to strict, assured chemical criteria
 - Chemical products and individual chemicals: Reduce the use of chemical products and individual chemicals that contain or comprise substances that are harmful to the environment and health. In the second instance, reduce the level of exposure

Chemical criteria are published in the document "Chemical criteria, Region Västra Götaland"⁴², which is updated in line with the tightening of legislation and the emergence of new knowledge and new requirements.

³⁸ Products that are goods are defined in chemical legislation as objects where the shape, surface or design, to a greater extent than its chemical content, determines their function. A distinction is made in the wording of the rules regarding goods and chemical products (substances and compounds). For example, a chair is a product whilst paint is a chemical product.

³⁹ <https://www.byggvarubedomningen.se/>. The same general aim must also be sought in leased premises

⁴⁰ Assured stipulations are defined on three levels: 1. The proportion of products within the current range that satisfy the demand is increasing. 2. A demand has been imposed in conjunction with procurement for all products (with exceptions in certain cases) within the current range. 3. The demand has been followed up.

⁴¹ Chairs, stools, benches, armchairs and sofas, for example,

⁴² http://www.vgregion.se/environmental_programme

Measures

Goal	Measure	Primary responsibility	Support	Reporting
9a	In the case of new construction and redevelopment ⁴³ increase the proportion of construction materials that are approved and assessed as "recommended" or "accepted" according to the criteria in BVB	Property Management Committee	Boards and committees where new construction or redevelopment projects are taking place	Annually: The results for construction materials that are registered at BVB
9b, c, d, e, f, g	Place and follow up requirements in the procurement process	Regional Executive Board	All boards and committees	Annually: Results of demands, follow-up and activities during the analysis and contract monitoring phase
9d	Choose redesigned/reused furnishing instead of purchasing new. When purchasing new furniture, products from the Green List must be prioritised	All boards and committees	Regional Executive Board	Annually: Examples of improvements and deviations
9b, c, d, e, f, g	Reduce the need for and use of new goods and chemical products that contain substances that are harmful to the environment and human health ⁴⁴	All boards and committees	Regional Executive Board	Annually: Examples of improvements and deviations

⁴³ The same general aim must apply to leased premises

⁴⁴ Through, for example, amended methods or a switch to the best possible technology. In the second instance, exposure (working environment and external environment) must be reduced. For guidance, see documents at <http://www.vgregion.se/miljoplan>



Pharmaceuticals

Introduction

Each year around 890 million⁴⁵ defined daily doses⁴⁶ of pharmaceutical substances are used in Västra Götaland. Pharmaceuticals are indispensable in the prevention, alleviation and cure of diseases. Long-term research shows that certain pharmaceutical substances produce harmful effects when they find their way into the environment. Pharmaceutical residue can find its way into the environment through production and use.

The pharmaceutical production chain is often long and comprises of a series of stages in which several companies and countries could be involved. There are thus a number of stages in the chain where pharmaceutical substances risk reaching the environment in high concentrations. Very high concentrations of pharmaceuticals have been identified in wastewater from pharmaceutical producers at several locations – in India and China for example⁴⁷ – and a growing number of studies indicate that there are significant emissions from certain industrial facilities in the Western world⁴⁸.

Pharmaceutical substances that are not broken down in the body or at the sewage treatment plants will eventually end up in our watercourses. Public knowledge of how pharmaceuticals affect the environment is currently limited and it is vitally important to increase awareness of ways in which the impact on the environment can be reduced. Our consumption of antibiotics has resulted in a whole series of infections that can no longer be treated. The situation where bacteria are becoming resistant to antibiotics is one of the biggest public health problems of our time.

By making requirements in conjunction with the procurement of pharmaceuticals and through systematic follow-up of the requirements, Region Västra Götaland can reduce the risk that pharmaceutical residue finds its way into the environment through the production chain. Working to ensure rational use of antibiotics will contribute to a reduction in the use of antibiotics and promote the use of the correct type of antibiotics.

Long-term goal

Region Västra Götaland will reduce the environmental impact deriving from pharmaceuticals without reducing patient benefit.

Goal 2020

10. Reduce the environmental impact deriving from the production and use of pharmaceuticals

Follow-up of goal 2020

The goal is followed up using core indicators:

10a Proportion of suppliers with agreements that include environmental requirements⁴⁹ (target 100%) and where an evaluation has been made (target: increase)

10b Number of antibiotic prescriptions/1,000 inhabitants (target 250)

⁴⁵ Includes use in both in-patient care and prescriptions within Region Västra Götaland

⁴⁶ Defined daily dosage (DDD) is a measure that can be used, for example, to compare different substances with each other. The DDD for a specific substance is set by the WHO and is equivalent to the assumed average dosage for adults in conjunction with maintenance treatment for the primary indication of the medical product in question.

⁴⁷ Li D, Yang M, Hu J, Ren L, Zhang Y, Li K. Determination and fate of oxytetracycline and related compounds in oxytetracycline production wastewater and the receiving river. *Environ Toxicol Chem.* 2008;27:80–6

⁴⁸ Larsson DGJ. *Utsläpp från läkemedelsindustri påverkar miljön. Antibiotikautsläpp riskerar också vår egen hälsa. Läkartidningen.* 2012;109:750–3

⁴⁹ <http://www.upphandlingsmyndigheten.se/hallbarhet/stall-hallbarhetskrav/>

Measures

Goal	Measure	Primary responsibility	Support	Reporting
10.	Impose and follow up requirements ⁵⁰ in the procurement process	Regional Executive Board	-	Annually: Results of requirements, follow-up and activities during the analysis and contract monitoring phase
	Develop the demand process and follow up pharmaceutical procurements through external and national collaboration	Regional Council	Environment Committee	Annually: Activity report
	Work to promote the rational use of antibiotics	Commissioned Primary Care Board, Primary Care Board, Dental Care Board, hospital boards	Regional Executive Board	Annually: Activity report
	Reduce the prescription of identified medical products with significant documented environmental impact ⁵¹	Hospital boards, Commissioned Primary Care Board, Primary Care Board	Regional Executive Board	Annually: Examples of improvements and deviations
	Reduced disposal of pharmaceuticals ⁵²	Regional Executive Board Hospital boards Commissioned Primary Care Board, Primary Care Board	-	Annually: Examples of improvements and deviations
	Increase knowledge of the environmental impact of pharmaceuticals ⁵³	Hospital boards, Commissioned Primary Care Board, Primary Care Board,	Regional Executive Board	Annually: Activity report

50 <http://www.upphandlingsmyndigheten.se/hallbarhet/stall-hallbarhetskrav/>

51 Focus on quinolones and diclofenac initially, but also set up an enquiry to identify pharmaceuticals with a significant documented environmental impact and where satisfactory alternatives with a lower environmental impact are available. The purpose is to produce a prioritised list for reduction/substitution (in consultation with the Drug and Therapeutics Committee)

52 E.g. through systematic work on the range, packaging sizes and compliance with recommended pharmaceuticals

53 Information and training for patients, employees and decision-makers



Medical gases

Introduction

Region Västra Götaland's emissions of medical gases account for approximately eight per cent of the organisation's total climate impact. Carbon dioxide is the main greenhouse gas although a whole range of other gases also affect the climate, including nitrous oxide, sevoflurane, isoflurane and desflurane. As a greenhouse gas, nitrous oxide is approximately 300 times stronger than carbon dioxide, and sevoflurane, isoflurane and desflurane have even higher global warming potential.

Nitrous oxide used in the healthcare system accounts for just under one per cent of nitrous oxide emissions in Sweden⁵⁴. In Region Västra Götaland, carbon dioxide emissions related to medical gases account for a proportion of Region Västra Götaland's total carbon dioxide emissions that is almost as high as emissions from energy use in properties. Long-term exposure to nitrous oxide could result in ill-health for employees within the healthcare system. The dental care system uses nitrous oxide in its operations, although the majority of emissions take place at the Region's hospitals for obstetric and anaesthetic purposes. Each year, around 19,000 births are handled by operating units within Region Västra Götaland.

A reduction in emissions must take place but with due account taken of the patients' well-being. This means that measures to reduce emissions mainly involve reducing unnecessary use of medical gases and the destruction of the nitrous oxide that has been used.

Long-term goal

Region Västra Götaland will reduce its environmental load deriving from medical gases that have a negative impact on climate

Goal 2020

11. Emissions of nitrous oxide in the healthcare system⁵⁵ will be reduced by 75 per cent compared with the 2009 figure

Follow-up of the goal for 2020

The goal will be followed up using the core indicator:

11. Emitted volume⁵⁶ of nitrous oxide expressed as kg CO₂ equivalents

⁵⁴ According to the Swedish Environmental Protection Agency, agriculture is the single largest source of nitrous oxide, producing 76 per cent of emissions

⁵⁵ Nitrous oxide emitted from hospitals and the dental care system

⁵⁶ Based on the purchased volume and the volume sent for destruction

Measures

Goal	Measure	Primary responsibility	Support	Reporting
11.	More effective collection of nitrous oxide for destruction ⁵⁷	Hospital boards		Annually: Examples of improvements and deviations
	Discontinue the supply of centrally distributed nitrous oxide to operating units that only use nitrous oxide infrequently	Hospital boards	Property Management Committee	Annually: Examples of improvements and deviations
	Search for leaks in pipelines and connections ⁵⁸ and rectify any defects	Property Management Committee	Hospital boards	Annually: Examples of improvements and deviations
	Ceiling-mounted and wall-mounted units and connected (unmounted) equipment checked on a continuous basis and remedial action taken as necessary	Hospital boards	Property Management Committee	Annually: Examples of improvements and deviations
	Minimise the use of nitrous oxide and review the potential for using mobile destruction facilities	Dental Care Board	-	Annually: Examples of improvements and deviations
	Investigate measures to reduce emissions of other climate-impacting medical gases ⁵⁹	Hospital boards	Environment Committee	Annually: Activity report

⁵⁷ Through, for example, correct handling of equipment, information to patients and training of employees

⁵⁸ Which are part of the fixed network.

⁵⁹ Sevoflurane, isoflurane and desflurane

Organisation and responsibility

Organisation	Responsibility
Political organisation	
Regional Council	Supreme decision-making body and the body responsible for adopting the Environmental Programme
Regional Executive Board	Responsible for supervising other committees and boards and monitoring Region Västra Götaland generally to ensure that it discharges its undertakings in different operating areas based on decisions reached by the Regional Council
Boards of provider organisations	Responsible for <ul style="list-style-type: none"> ensuring compliance with the Environmental Programme and in-house environmental goals reporting results to the Group Office
Ordering committees	Responsible for <ul style="list-style-type: none"> ensuring compliance with the Environmental Programme and in-house environmental goals ensuring that environmental demands based on the environmental goals are included in agreements with external providers
Environment Committee	The Environment Committee has strategic and coordinating responsibility for internal environmental work within Region Västra Götaland. The Committee is thus responsible for proposing environmental goals and for taking other initiatives that are of environmentally strategic importance. The Environment Committee is responsible for following up the Environment Programme in conjunction with the Annual Report and for presenting proposals for any remedial action that is required to ensure that the goals are achieved within the period.
Management and supervisory organisation	
Regional Director	Responsible for <ul style="list-style-type: none"> implementation and follow-up of political decisions ensuring that environmental issues are kept up to date compliance with current environmental legislation
Heads of administrations and companies	Responsible for <ul style="list-style-type: none"> ensuring that environmental work is carried out according to the decided control documents ensuring that the environmental work that is carried out is reported to the company or administration board or committee compliance with environmental legislation and other stipulations
Line managers	Potentially delegated responsibility for environmental issues
Environmental organisation	
Environment Director, environmental strategist, environmental coordinator or equivalent	Acts as support and as a resource for the administration and company management teams. Typical duties include <ul style="list-style-type: none"> leading the work of introducing and maintaining environmental management systems in different operating areas compiling supporting documentation for environmental reports ensuring implementation of environmental training for the administration acting as a point of contact in dealings with the Environment Department at the Group Office and environmental agencies
Environmental representative	Acts as support and as a resource in environmental work and is part of the line system, where the manager responsible appoints an environmental representative
Chemical representative	Acts as support and as a resource in chemical work and is part of the line system, where the manager responsible appoints a chemical representative

Organisation	Responsibility
Environmental organisation cont'd.	
Environment Department at the Group Office	<p>Responsible for supporting and coordinating internal environmental work within the following areas</p> <ul style="list-style-type: none"> • Environmental reporting: Produces instructions, compiles results from environmental work, analyses results and presents proposals for remedial action • Environmental management: Supports management teams and companies in their work on routines linked to environmental reporting and the goals set out in the Environmental Programme • Procurement/purchasing: Supports the purchasing organisation in the task of integrating the targets and measures set out in the Environmental Programme in the purchasing process • Knowledge and skills: Provides online environmental training and runs training programmes for new environmental representatives • Networking: Runs twice-yearly network meetings for environmental coordinators • Implementation of the goals set out in the Environmental Programme: <ol style="list-style-type: none"> 1. Coordination of work on reducing the presence of substances that are harmful to the environment and health 2. Coordination of work on overall measures within the target area "Products and Waste" 3. Communication of the results of environmental work in general and dissemination of examples of good practice 4. Transfer of knowledge and skills acquired through external development work to environmental work in the Region's operations within transport, energy, food and sustainable use of resources.

Environmental Programme 2017–2020 is available at:
vgregion.se/miljoplan or at intra.vgregion.se/miljoplan