

SVENSKA TIDNING

A LOOK AT SWEDEN AS IT GREET'S THE 2050 NEW YEAR

PIPPA WYSONG

Looking back over the rapid changes to the globe caused by climate change in recent decades, Sweden has fared relatively well thanks to its location and geography. However, it differs noticeably from the place it was just 30 years ago.

It is the largest country in Northern Europe and extends into the Arctic Circle. Its long narrow shape borders on Norway to the west and has a long coastline along the Baltic Sea to the east where it also borders with Finland.

While the country has experienced a variety of significant climate change induced changes, the effects have been mild compared to other parts of the world. Unlike many countries that have an extensive coastline, Sweden has not experienced loss of land mass from sea level rise. This is due to the land itself rising due to other geological activity. Still, the waters of the Baltic Sea have risen and have undergone other changes.

Much of the country, especially in the mid and northern regions continues to have an abundance of fresh water – much of it from heavy rain during the winter months when precipitation is intense and rain falls as often as snow. The downside is there are more floods than there once were. The last three decades have seen more landslides occurring on the southwestern part of the country, stretches of the east coast, and in other vulnerable parts of the country, even though measures continue to be taken to prevent them. Extreme weather events are now more common, and are a noticeable cause of physical injuries and death.

Heat waves and drought have adversely affected Sweden's forests, especially in the south where there are more frequent wildfires. People living in the south now experience periodic water shortages, leading to problems getting sufficient water for livestock or dwindling crops that now require more water to grow. In some southern regions, wastewater is used on crops, leading to increased disease outbreaks from contaminated foods.

Reduced overall rainfall during the summer months has led to other changes, especially in land use. The southern part of the country, where agriculture was once a key activity, now experiences longer periods of drought.

Crops such as barley oat, oats, wheat and canola continue to be grown, as well as livestock, but they have all moved further north than 30 years ago. Sweden is fortunate in that climate change has brought longer growing seasons. In the Mälardalen Valley, the production of cereal crops has increased.

Sweden's increased crop production means it has a competitive advantage compared to elsewhere in Europe, and places that can grow winter wheat see increased yields. The country continues to be an important exporter of cereal crops.



Heat waves are causing frequent forest fires in the southern regions of Sweden.

Source: 1zoom.me

The downside is that the warmer weather has caused plants to reach maturity earlier and has improved conditions for crop pests and diseases. There are threats to agriculture from an increase in extreme weather events, and from the summer droughts. In addition, nitrogen leaching has deteriorated farmlands, decreasing crop quality and negatively impacting food-producing animals.

Farm animals are heat stressed, and have weaker immune systems along with reproductive problems, and don't grow as well as they used to. Dairy cattle produce less milk and fewer offspring than their forbearers. Land and water-based animals alike are more exposed to pathogens, vectors, and wildlife which can carry disease, increasing transmission of communicable diseases. Reindeer herding, a traditional activity of Sweden's indigenous population the Sami, is now almost non-existent.

Water temperatures in the Baltic sea are much warmer than they once were with far less ice cover during the winter months and earlier melting. There are more stresses on the Baltic Sea from activities not only from Swedes but from ever-growing populations in neighboring countries which also have coastlines on the water such as Finland, Latvia, Lithuania, and Estonia.

Fishing activities face continuing challenges. High intensity storms disrupt aquaculture structures, increasing fish escapes and causing stress and physical harm to fish. The cod industry has collapsed and the remaining fishing industry is struggling. Some warm-water species have replaced many of the traditional northern fish in lakes. Fishing in the North Sea is still viable.

The overall warmer weather has brought increases in vector-borne diseases such as Lyme disease, leishmaniasis, and West Nile to Sweden. Mosquitos, ticks, and other vectors are more prevalent and active. This includes a number of invasive species.

Swedes who travel abroad are also bringing home a variety of infectious diseases, such as dengue fever, cholera and malaria. Financial, medical, and animal systems are all impacted by outbreaks of diseases that were once considered 'exotic'.

Some Swedes are engaged in 'last minute travel' to see interesting geographic or historic sites that are disappearing because of climate change. They are travelling to see the final remains of glaciers in places such as Spain (the Pyrenean glacier) and in the Italian Alps; to Italy to see the remains of a flooded Venice, or to places such as the constantly shrinking islands of Hawaii.

When relaxing at home, the abundance of warm weather sees Swedes out enjoying the outdoors, spending more time near rivers, ponds, and lakes, and eating outside (e.g., barbecuing and picnics). In many parts of the country, there is more particulate air pollution from wild fire smoke – a now common cause of respiratory infections, lung cancer, asthma and other similar diseases.

Sweden has also seen increases in its immigrant population. Migrants endure harsh travel conditions, over-crowding, low socio-economic status, low rates of vaccination along with disease outbreaks, and limited access to healthcare. With the huge demand from millions of desperate environmental refugees from around the world, particularly South East Asia (such as China, Bangladesh, India, Vietnam, Indonesia, and Thailand), the county is struggling with dilemmas around how many can be welcomed into the country without overwhelming its own resources.

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Cite this as: Wysong P, Kwan X, Cousins M, Lambraki I, Carson C, Parnley J, Majowicz S. "A look at Sweden as it greets the 2050 new year": scenario newsletter developed for participatory scenario analysis workshops in Sweden [internet]. 2020 Nov 5. Available from: <https://uwaterloo.ca/food-epi-group/sites/ca.foodborne-disease-epidemiology-group/files/uploads/files/swedenscenarionewsletter2020.pdf>