Planned WtE plant in Warsaw, source: MPO Sp. z o.o. w m.st. Warszawie. Image by courtesy of Doosan Lentjes GmbH.

Industry barometer
Waste-to-Energy
2022

Contents

Comment by CEWEP

No further burdens

Like most industries in Europe, the Waste-to-Energy industry is struggling with the consequences of the current global crises. Operators, in particular, are stuck between increasing costs in almost all areas and decreasing waste volumes.

In recent years, it has been a common practice among the political actors in Europe to impose higher costs on thermal waste treatment, both at the EU level and in many Member States. This policy follows the narrative that "cheap" incineration obstructs and prevents recycling, a narrative that is wrong in the first place.

In fact, thermal waste recovery is and will remain the most important pillar for the treatment of non-recyclable waste in Europe. However, this does not mean that thermal waste recovery is responsible for the fact that these waste cannot be recycled. With the same logic, the waste industry as a whole could be held responsible for the fact that there is such a thing as waste.

In most EU countries, thermal waste recovery has become more expensive in recent years, but high-quality recycling has not significantly increased. Some Member States introduced taxes or included waste incineration in their emission trading schemes, which has caused an increase in costs. In many cases, recycling was stated to be the motivation to impose such measures. In fact, reaching high-quality recycling depends on the production. The production (eco design) is key to more and better recycling, while increasing the costs of incineration is not.

For the non-recyclable heterogeneous waste, there is no sustainable alternative to thermal waste treatment. If the artificial price increases continue, waste fees for private households and businesses will increase as well – and so will inflation.

EU taxonomy is a mistake

This year's WtE industry barometer clearly shows that the EU Taxonomy Regulation will probably achieve the opposite of what is desired in the waste sector. The regulation leads to more greenhouse gas emissions as it undermines the efforts to divert waste from massive landfilling to (thermal) treatment higher up the hierarchy. It also remains a mystery why the taxonomy does not include metal recycling from the bottom ash of WtE plants.

At the same time, a (too) narrow interpretation of the Taxonomy Regulation will prevent the switch from fossil fuels to largely biogenic and thus renewable inputs, especially in the heating market.

The taxonomy does not promote high-quality recycling either. High-quality recycling requires specifications for the recyclability of products, and not a bashing of thermal waste treatment.

As in previous years, CEWEP (Confederation of European Waste-to-Energy Plants) supported ecoprog's survey on the Waste-to-Energy Industry Barometer in 2022 – a year that is characterised by the COVID-19 crisis and the consequences of the war in Ukraine – and encouraged its members to participate.

WtE industry barometer: mood worsens significantly

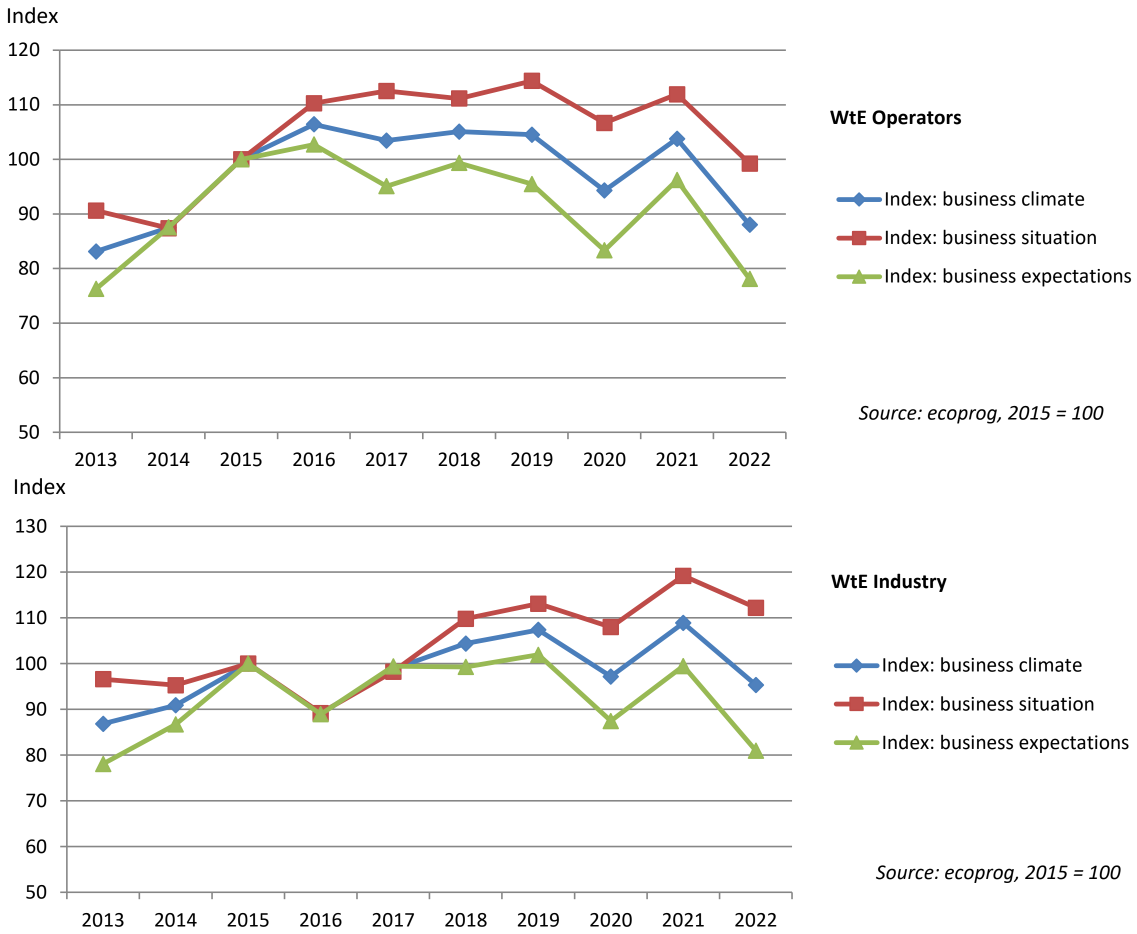
The general economic problems in Europe also affect the WtE sector. First and foremost, plant operators report an increasingly poorer business development, and they also expect the downward trend to continue. In the WtE industry, on the other hand, the order situation remains favourable; however, the cost increases are of particular concern.

Plant operators: strongest downturn in sentiment since 2012

The business climate among the WtE plant operators decreased from 104 points last year to 88 points in 2022. This is the strongest decline in a year since the first survey in 2012.

Nevertheless, 90% of respondents still rate their current business situation as good or satisfactory. However, the share of operators rating their business situation as "good" (50%) declined significantly in comparison to previous year's figure (73%). 40% of the WtE operators report a decreasing demand in the past 12 months, while only 10% state that their demand was increasing.

Fig. 1: Development of the business climate among WtE operators and in the WtE industry

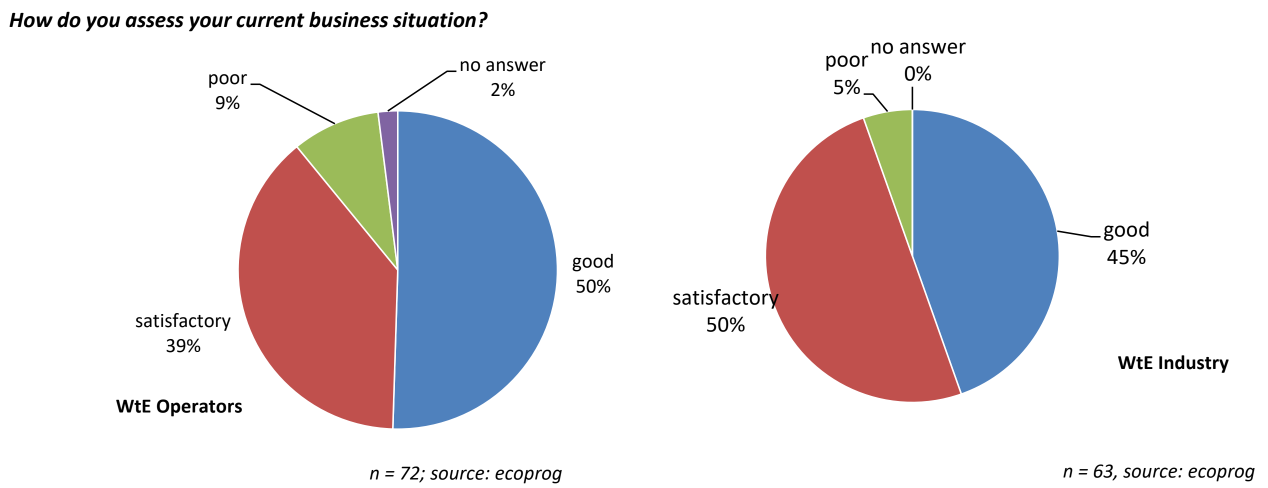


It can be assumed that especially the commercial waste volumes have declined recently. Supply chain problems and high energy costs have led to production outages in the industry and, most recently, to a slump in the construction industry. To what extent the inflationary shock of the recent months has already affected household waste amounts remains unclear so far.[1]

Only 27% of the plant operators report high capacity utilisation. We assume that the still comparatively good assessment of their own business situation can, at least in parts, be the result of increased revenues in the energy sector. The industry barometer survey does not ask for those since the energy prices are well represented by the different exchanges.

However, the industry is sceptical for the coming months. 36% of the plant operators expect less favourable business performance, only about half as many expect a recovery.

Fig. 2: Business situation among operators and in the industry



Industrial situation still moderate

The WtE industry is less sceptical than the plant operators. Like the operators, the industrial players rate their current business situation with 44 points, and thus most of them answered "good" or "satisfactory". With 39 points, this is the second highest score in the past 10 years, only exceeded by the previous year's figure (54 points). 31% of the companies even report an increase in demand in the past 12 months; 27% report an increase in order backlog.

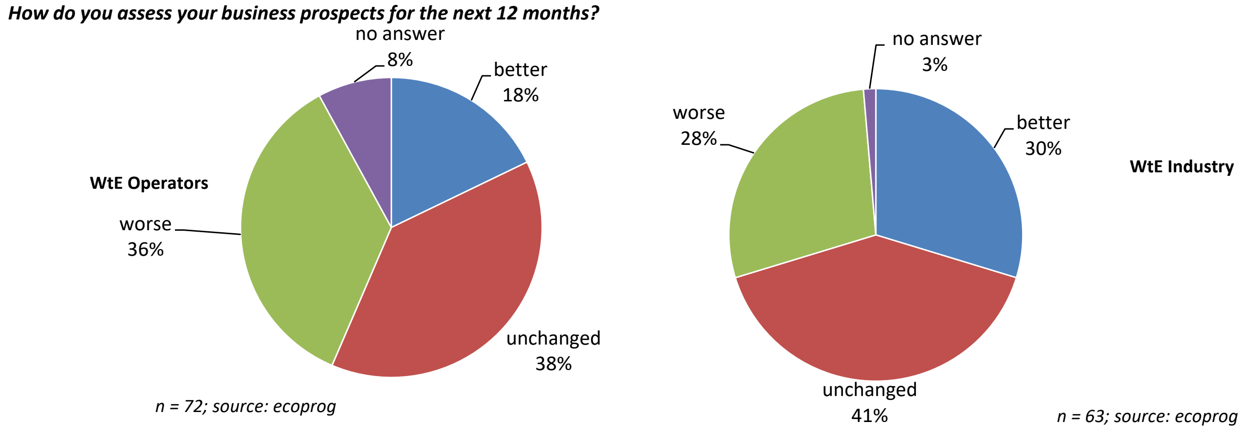
Even the prospects for the future are moderate in the industry; optimists and pessimists are roughly balanced here.

ecoprog considers the comparatively positive framework conditions for the industry – despite the emerging weakness in the waste market – to be the background to this moderate assessment.

[1]These and all other interpretations of the data are an assessment by ecoprog. Accordingly, the responsibility for these statements lies solely with ecoprog.

These are characterised by an outdated European plant portfolio, retrofitting (also as a result of increasingly stringent requirements) and the ongoing transformation of the waste management systems away from landfilling, especially in Southern and Eastern Europe.

Fig. 3: Business expectations among operators and industrial players



Number of employees increases

Both groups, operators and the industry, expect a stable to increasing number of employees in the future, despite some problems. In the WtE industry, this trend is more pronounced due to the more positive business performance and, above all, business expectations.

Prices are inconsistent

For the first time in many years, plant operators expect lower gate fees. Around half of the respondents expect such a development. At many locations, this is only logical in view of the decreasing waste quantities. Less than 30% of plant operators surveyed expect prices to increase.

The WtE industry, on the other hand, expects its products and services to be subject to rising prices. The reasons for this are mainly due to the increased prices for precursors and energy.

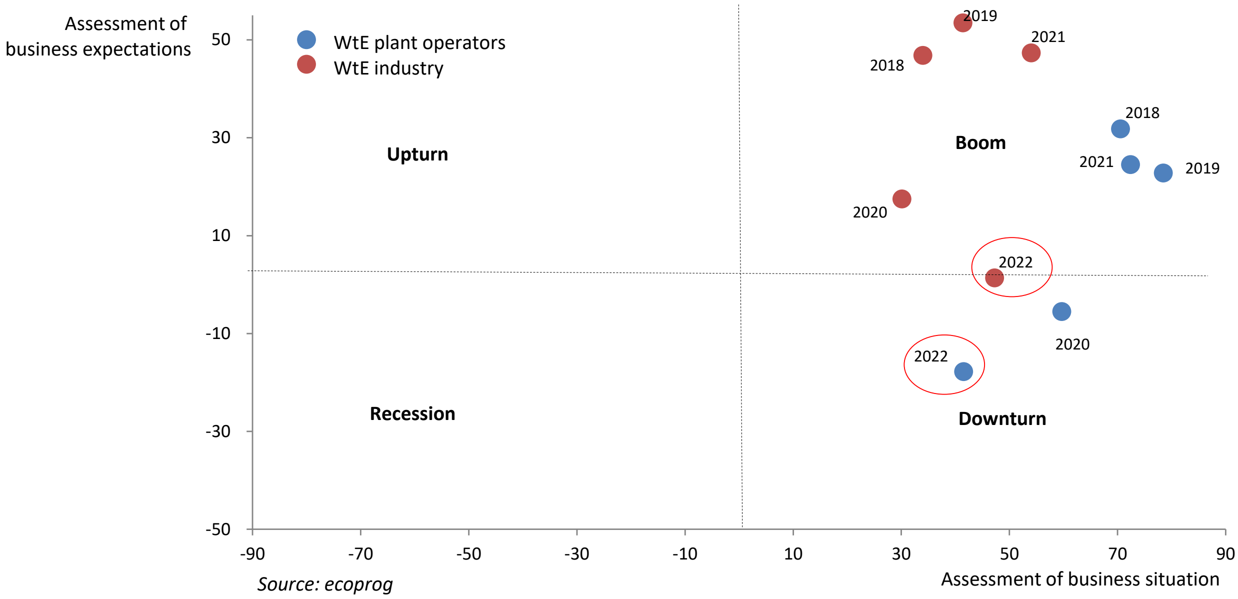
Dealing with current crises

The increasing costs in recent months are a major problem for the industry. The operators are mainly affected by increased costs for supplies, maintenance and repair, as well as energy. These increased costs are also the biggest problem for the industry, followed by the availability of these precursors. The lack of skilled workers, which is certainly not a consequence of the COVID-19 crisis or the war in Ukraine, is the third largest problem.

EU taxonomy causes problems

For some time now, thermal waste treatment has met increasingly critical opinions from political actors. The result is legislation that is imposing ever bigger hurdles to this form of treatment. This holds also true for the assessment of thermal waste treatment in the EU Taxonomy Regulation, according to which activities that lead to a significant increase in waste incineration are defined as non-sustainable. Investments in this area should be reported, e.g. by financial market participants as part of their reporting obligations. This will de facto hamper investments in thermal waste treatment facilities and will also make it difficult to access EU funding.

Fig. 4: Classification of the results



As a result of this legislation, 60% of the plant operators fear that major investments will cause problems in the future, for example regarding financing or the acquiring of funding.

In addition to these own problems, most respondents expect that the development of waste infrastructure in countries that still have a high share of landfills will be hindered. Furthermore, a majority agrees with the assumptions that waste disposal will generally be more expensive in the future and that the integration of WtE systems into district heating networks will be more difficult. On the other hand, only 16% of the respondents believe that this legislation will lead to more recycling.

The WtE industry is also concerned about the importance of this regulation, especially for project financing – which is the basis for the industry's order backlog. However, more than half of the respondents assume that investments in WtE plants will continue to be important, as there is simply no alternative.

The WtE industry barometer has been elaborated annually since 2012. For the 2022 survey, we have questioned around 500 operators of thermal waste treatment plants and more than 700 plant manufacturers and suppliers in the WtE industry worldwide. Participants could either complete an online questionnaire or reply by e-mail or fax. The survey took place between the end of August and mid-September 2022.

ecoprog GmbH carried out the survey and the evaluation. As a respected industry expert, ecoprog assists clients from Germany and abroad in dealing with implementation-oriented management issues with political, technical or economic backgrounds in the sectors of environmental and energy technology. We work in the fields of strategy consulting, market and competition analyses as well as multi-client studies.

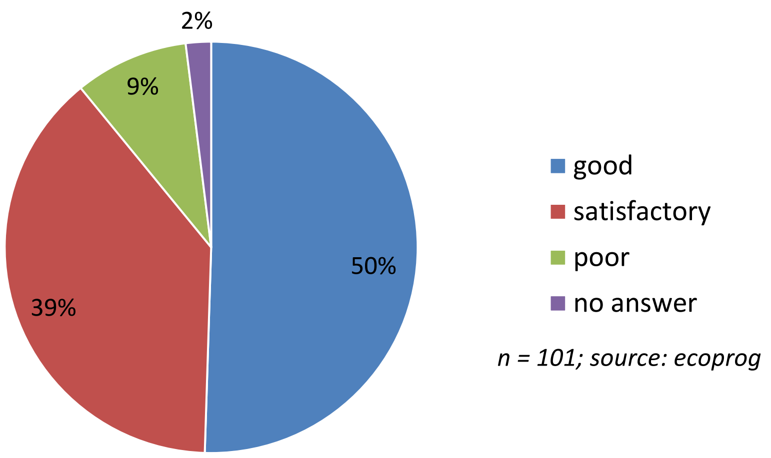
For each valid answer to the industry barometer, ecoprog will donate €10 to SOS Children's Village.

Data annex

Survey of operators of thermal waste treatment plants

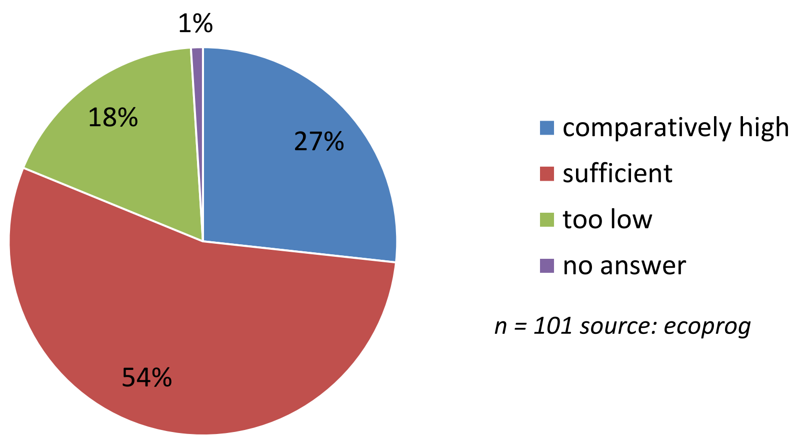
Current business situation

How do you assess your current business situation?



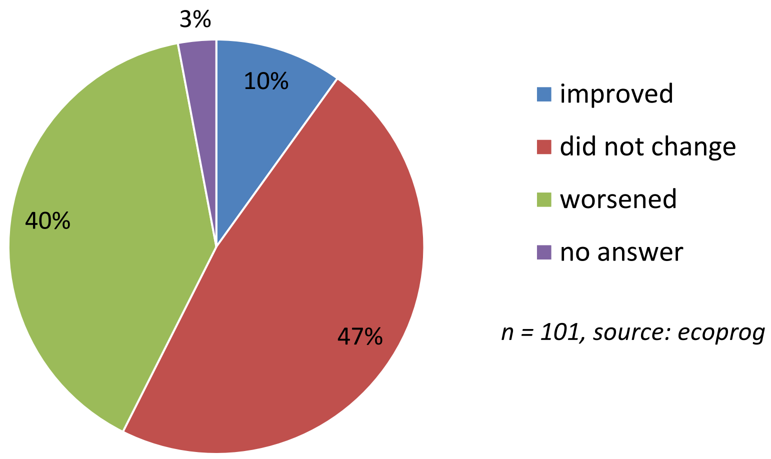
Current capacity

How do you assess the current capacity utilisation of your plant?



Demand in the past 12 months

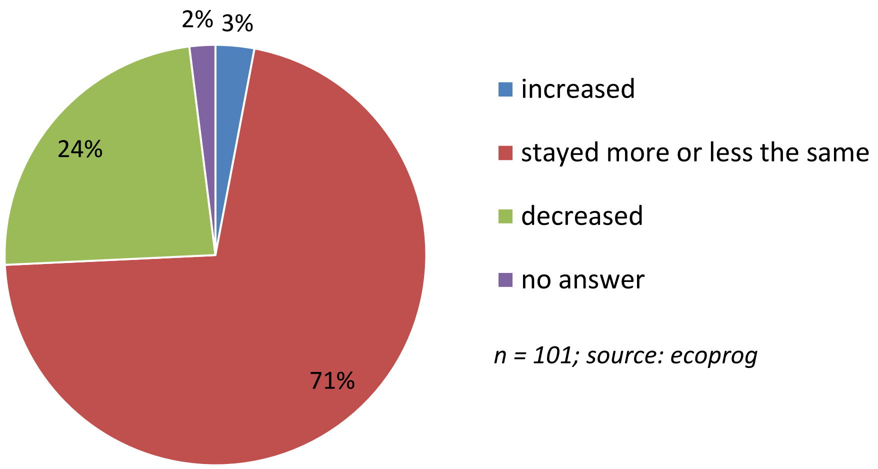
In which way has the demand on the spot market for municipal waste developed in the past 12 months? The demand has …



n = 101, source: ecoprog

Capacity utilisation in the past 12 months

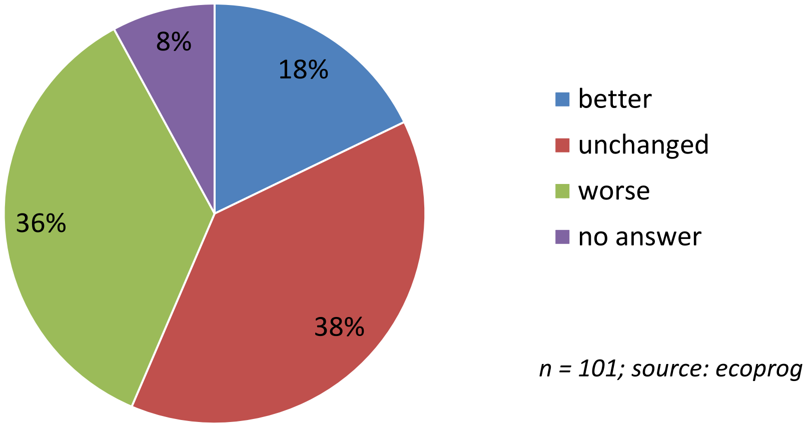
In the past 12 months, the capacity utilisation of your plant has…



n = 101; source: ecoprog

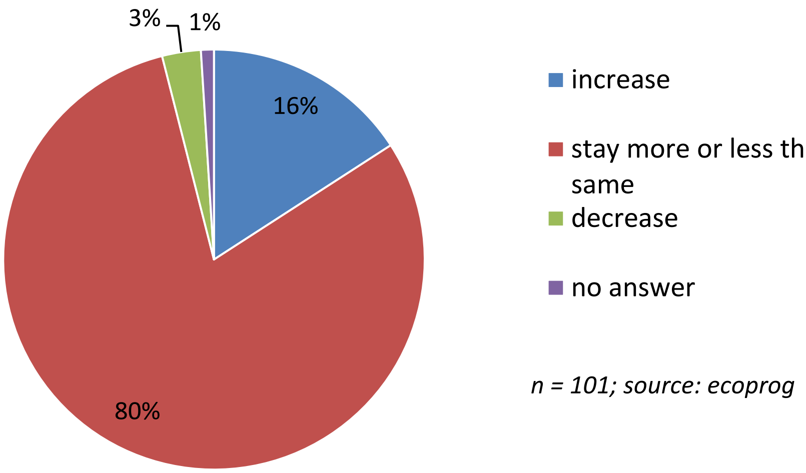
Business prospects

How do you assess your business prospects for the next 12 months?



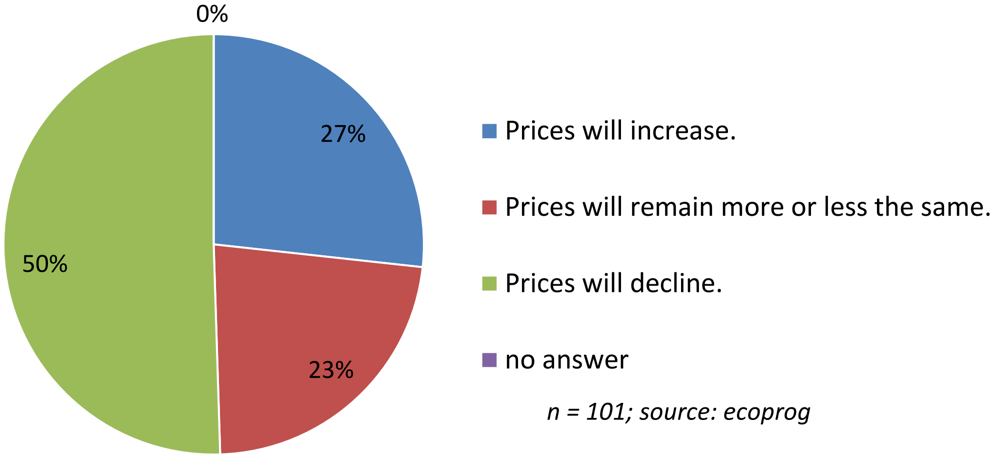
Workforce development

In the next 12 months, the number of employees working for your company will …



Gate fee development

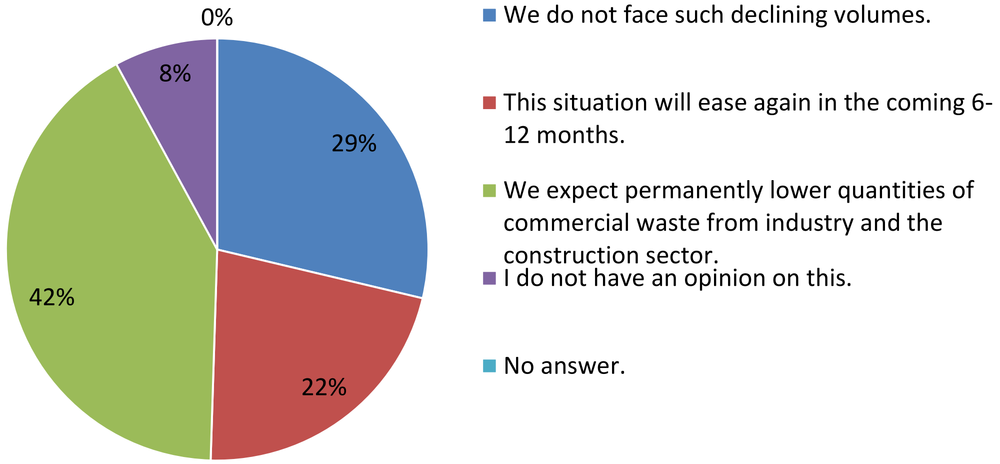
Which development do you expect for gate fees in the 12 months to come?



n = 101; source: ecoprog

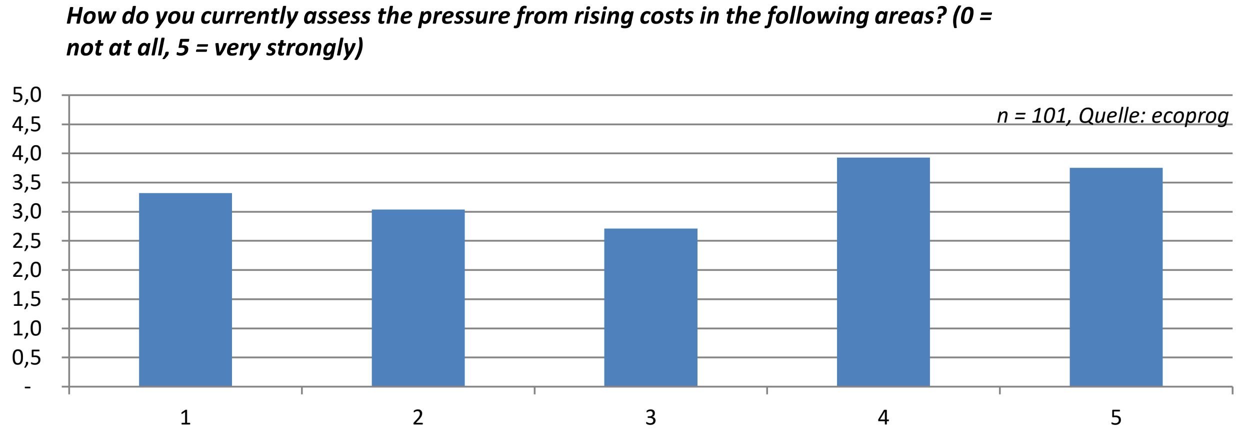
Commercial waste development

As a result of supply chain issues and the Ukraine war, some WtE plant operators recently reported declining volumes of commercial waste. What do you expect for the future?



n = 101; source: ecoprog

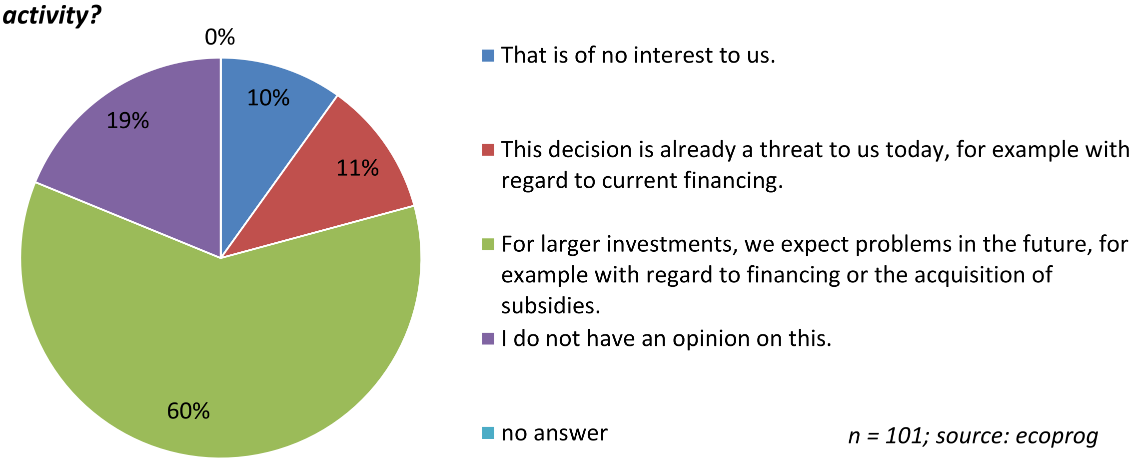
Pressure from rising costs



1 Energy costs
2 Costs for treatment of residues from thermal treatment
3 Staff costs
4 Costs for operating resources
5 Maintenance/modernisation

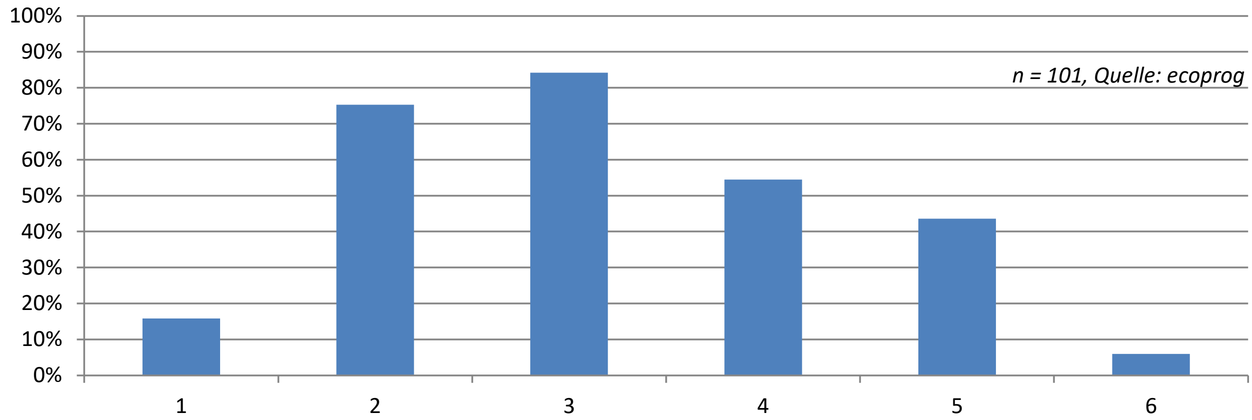
Relevance of the EU Taxonomy Regulation

According to the EU Taxonomy Regulation, investments that cause a significant increase in waste incineration are considered unsustainable investments. What is the relevance of this classification for your activity?



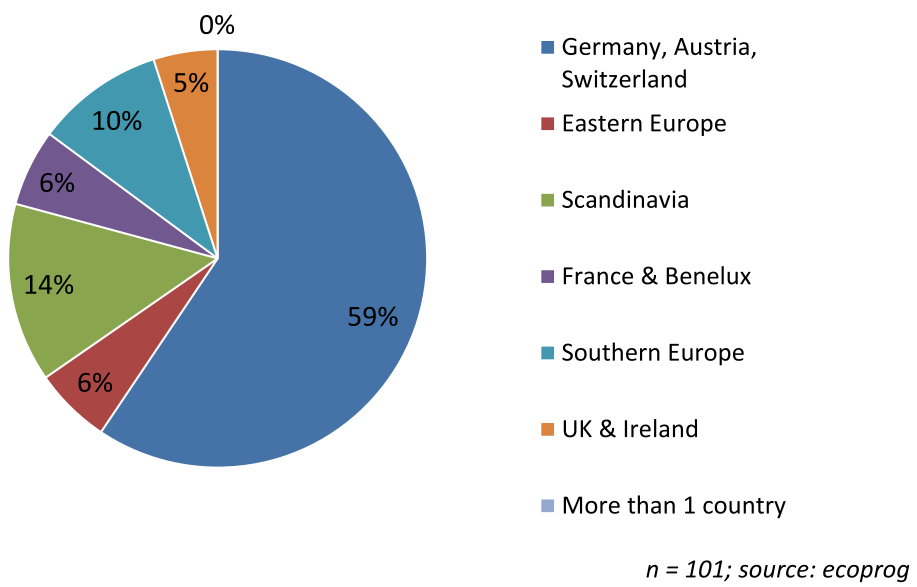
Consequences of the EU Taxonomy Regulation

What do you think are the overall consequences of this decision? (Multiple answers possible)



1 Recycling will increase as a consequence.
2 Waste disposal as a whole is becoming more expensive.
3 In countries where a lot of waste is still landfilled, the establishment of a proper waste treatment infrastructure is made more difficult.
4 The integration of WtE plants into district heating networks - and thus the replacement of fossil fuels - is becoming more difficult.
5 Investments in the recycling of residues, e.g. bottom ash are becoming more difficult; the incentives for this are decreasing.
6 I do not have an opinion on this.

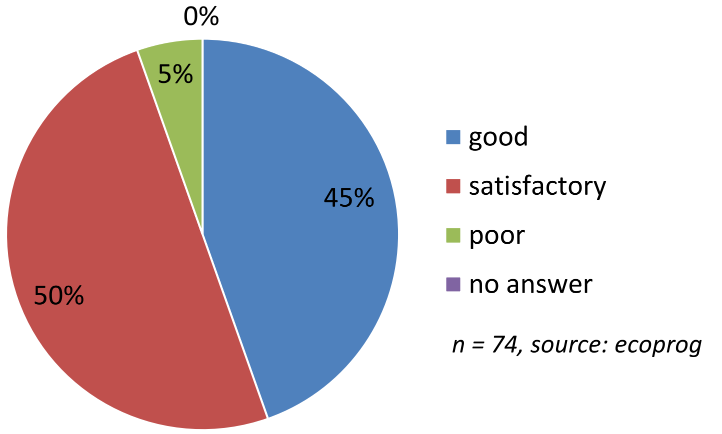
Plant locations of survey participants by region



Survey of WtE industry and WtE plant manufacturers

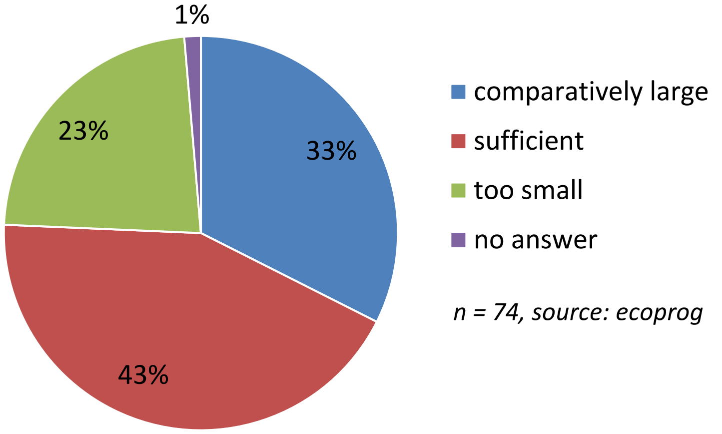
Current business situation

How would you describe your current business situation?



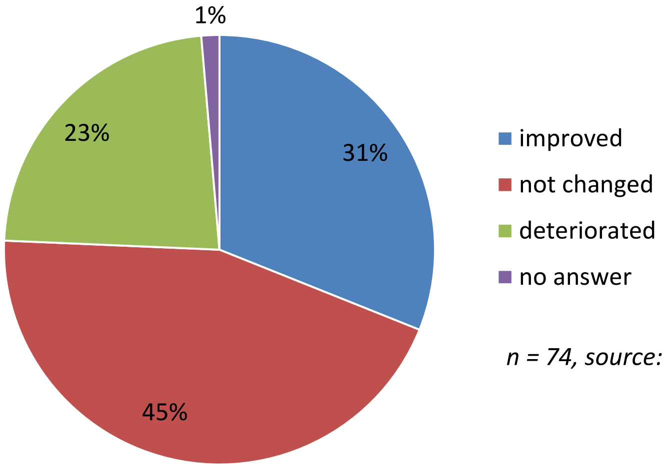
Present order backlog

How do you asses your present order backlog in the thermal waste treatment segment?



Demand in the past 12 months

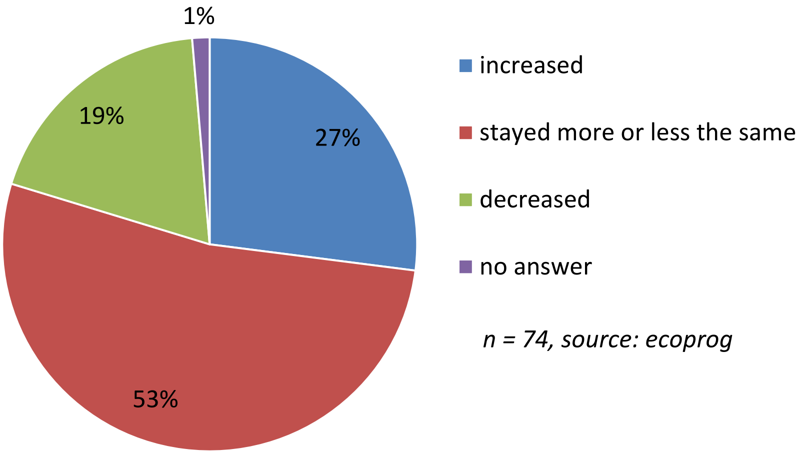
In which way has the demand in the thermal waste treatment segment changed in the past 12 months? The demand has …



n = 74, source: ecoprog

Order backlog in the past 12 months

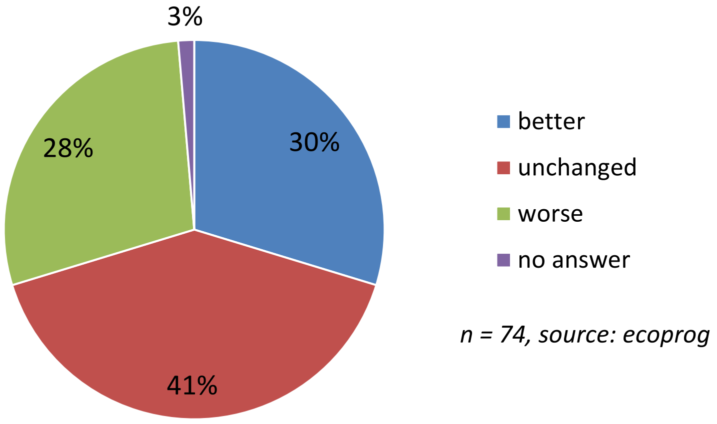
In the past 12 months, your order backlog in the thermal waste treatment segment has …



n = 74, source: ecoprog

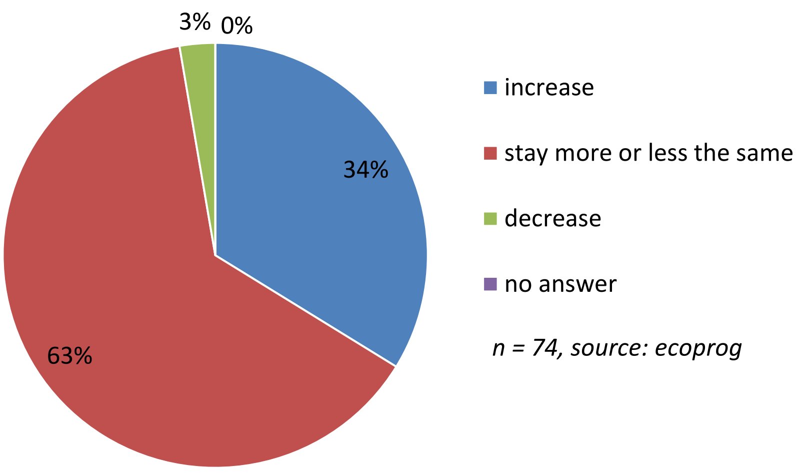
Business prospects

How do you assess your business prospects for the next 12 months?



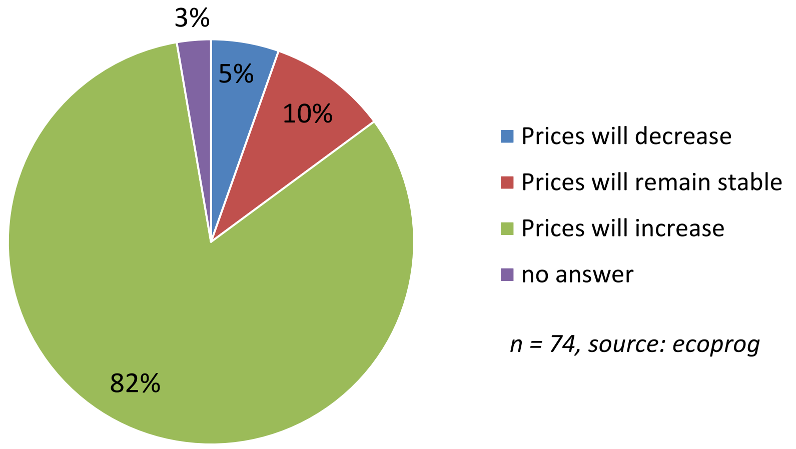
Workforce development

In the next 12 months, the number of your staff will …



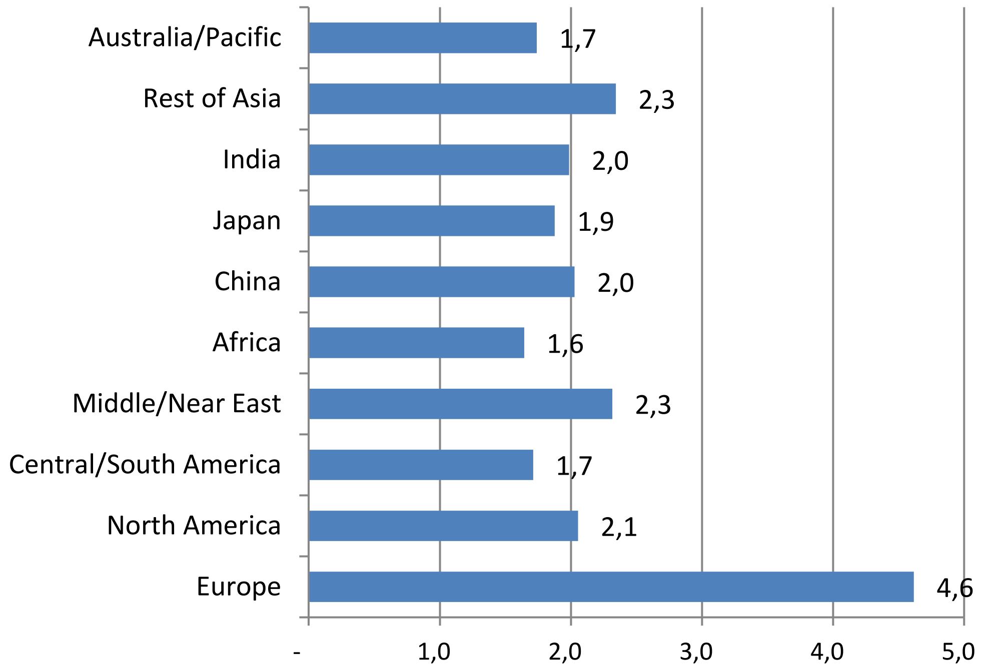
Future price development

In which way do you expect the prices for constructing, maintaining and modernising thermal waste treatment plants to develop in the next 12 months?



Current market regions

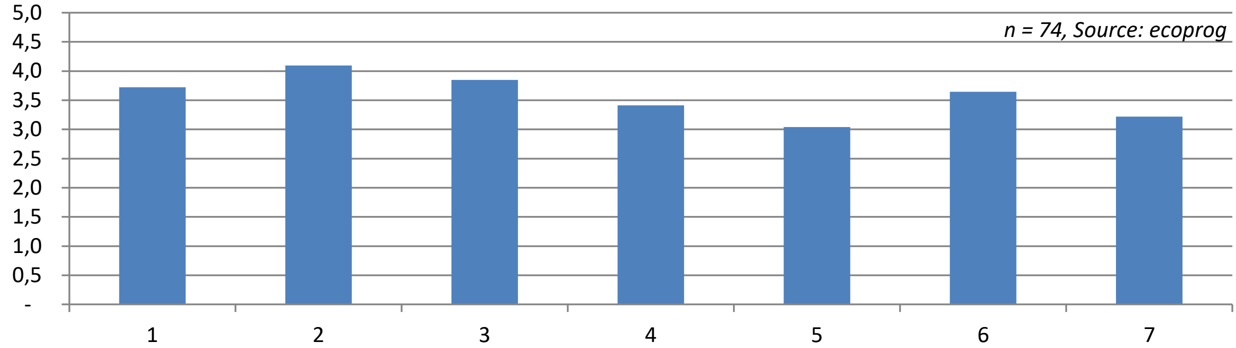
How important are the following markets for your company today? (1=unimportant, 5=very important)



n = 74, source: ecoprog

Current difficulties

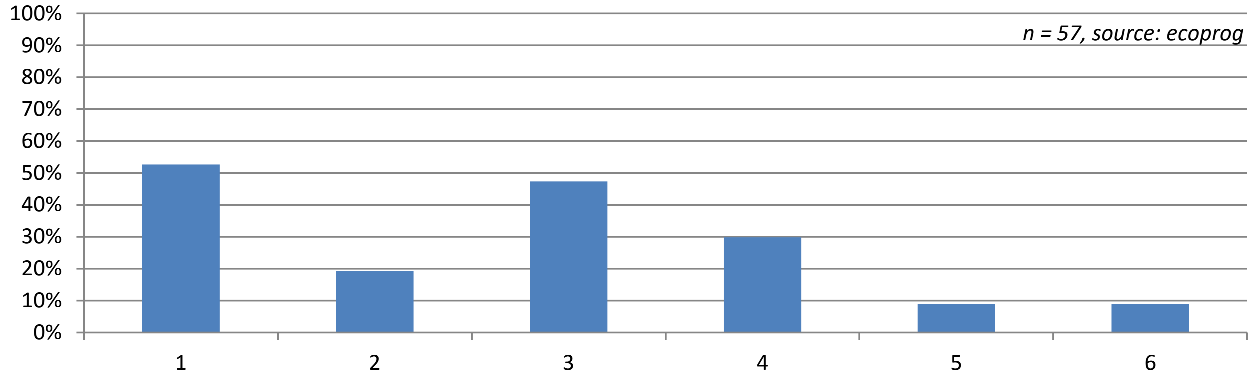
The consequences of the Corona pandemic and the war in Ukraine are causing serious problems for almost all industries, as is demographic change. Which of these problems do you feel is most urgent? (0 = not at all, 5 = very strongly)



1 Availability of supplier products
2 Price increases for supplier products
3 Rising energy costs
4 Lack of possibilities to adjust prices towards customers
5 Increasing staff costs
6 Shortage of skilled workers
7 Lack of apprentices / Junior staff

Relevance of the EU Taxonomy Regulation

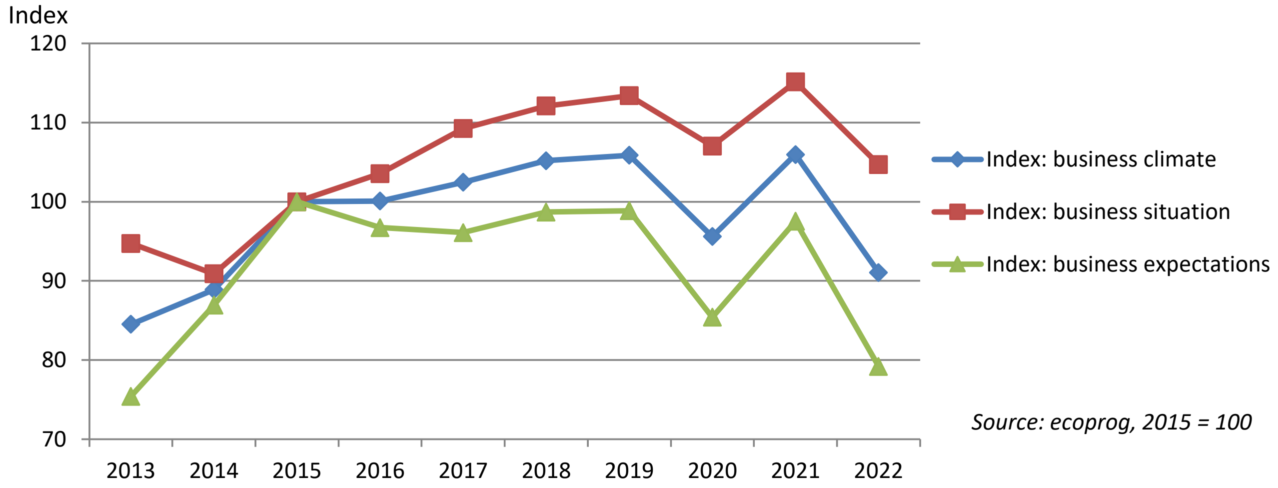
According to the EU Taxonomy Regulation, investments that cause a significant increase in waste incineration are considered unsustainable investments. What is the relevance of this classification for your activity? (Multiple answers possible)



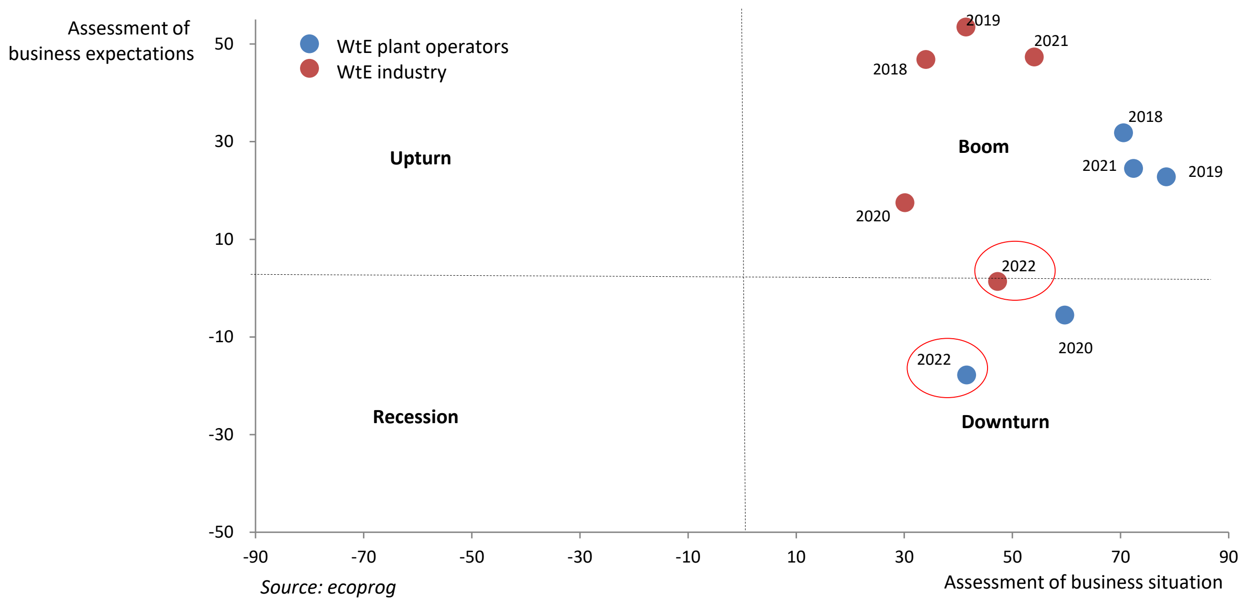
1 As there are no alternatives, waste incineration remains important, and the market also remains strong.
2 We expect a declining WtE business in Europe, despite still high landfill shares and a growing WtE asset.
3 We expect more problems with project financing.
4 We expect more problems with investors and/or loans for companies.
5 This is of no interest to us.
6 I do not have an opinion on this.

Time series

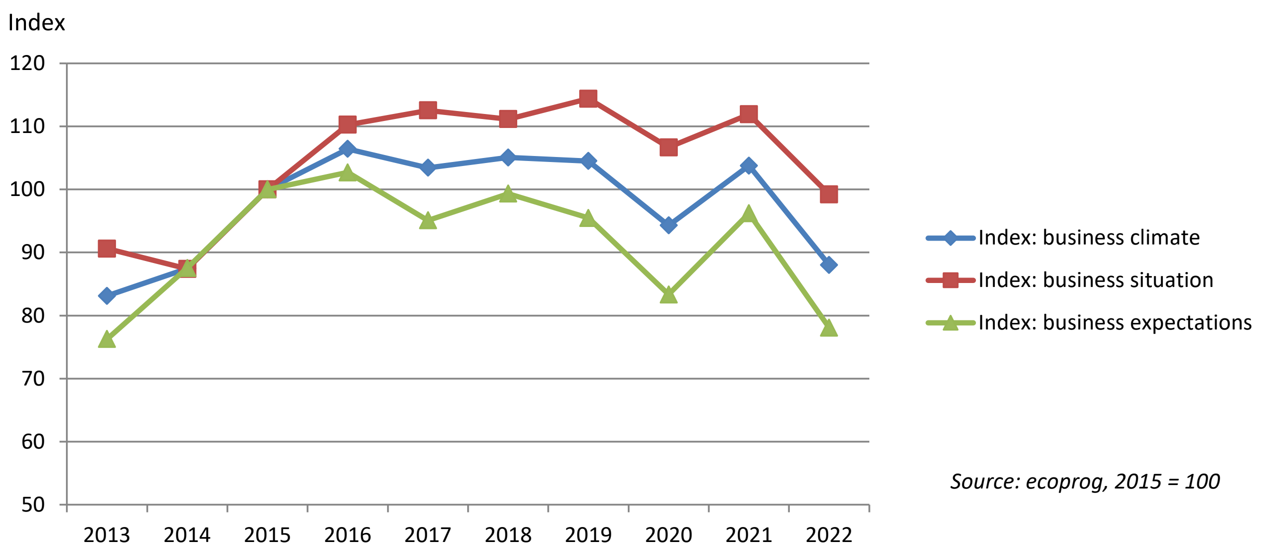
Industry barometer operators & industry



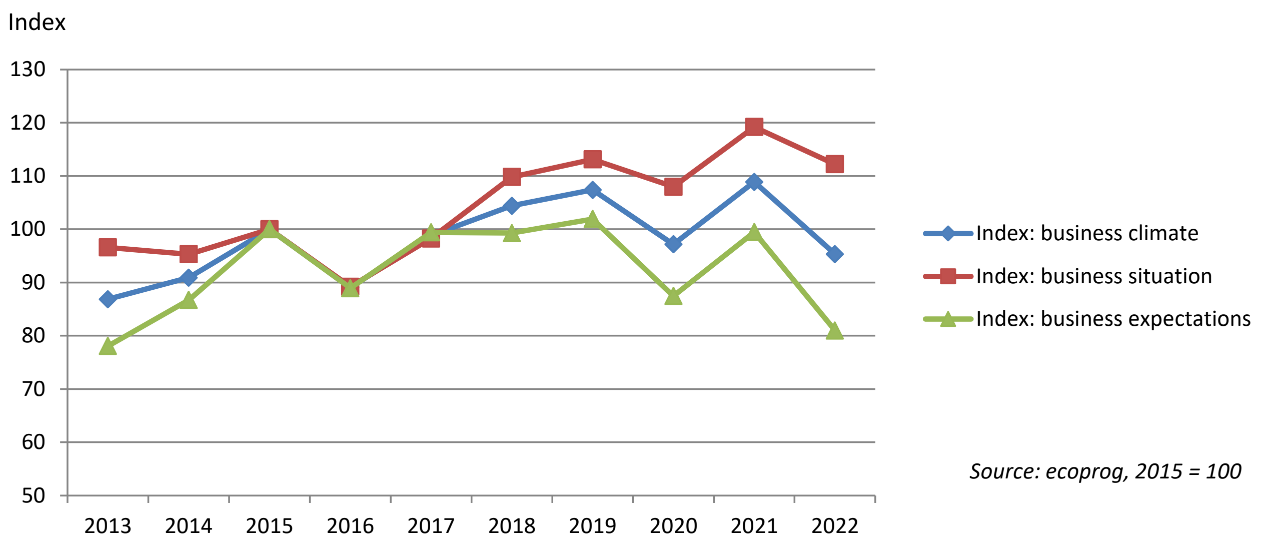
Classification of results



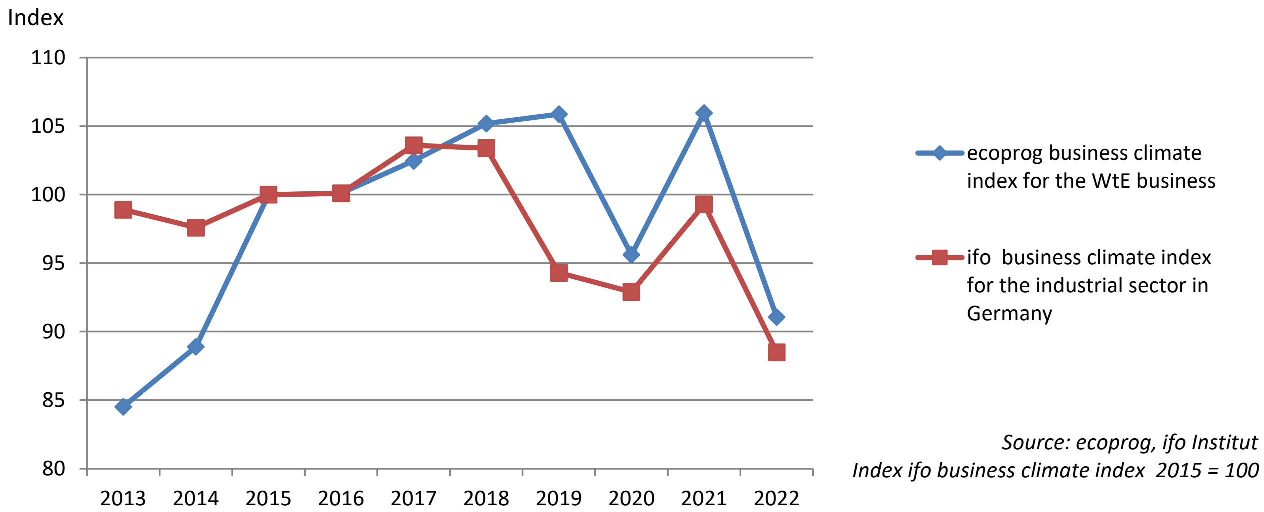
Industry barometer for operators of thermal waste treatment plants



Industry barometer WtE-Industry



Comparison of ifo business climate index



The calculation of the business climate index was carried out according to the method developed by the ifo Institute in the 1950s.

By courtesy of ifo Institute.

Ansprechpartner:

Mark Döing
ecoprog GmbH
Tel. +49 (0) 221 788 03 88 11
m.doeing@ecoprog.com