



*Assembly of a reciprocating grate Vario, with kind permission of Martin GmbH für Umwelt- und Energietechnik*

# Industry Barometer Waste-to-Energy 2020

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## Comment from CEWEP

### *Stability and disposal reliability*

The Waste-to-Energy (WtE) sector embodies a reliable anchor during the crisis. It provides positive impetus for investments and employment while ensuring reliable waste treatment services in turbulent times, despite travel restrictions and contact constraints which complicated and delayed several actions.

As demonstrated during the COVID-19 crisis, thermal treatment represents an indispensable and solid pillar in waste management.

Having reached an already high level beforehand, during the crisis, the capacity utilisation of the WtE plants has remained largely constant (81%) or increased (15%). Although the quantities of commercial waste decreased partly due to standstills caused by the pandemic, larger amounts of municipal solid waste accrued at the same time. This is due to the fact that people spent more time at home during the COVID-19 crisis.

### *Reliable disposal of medical waste*

When it comes to the safe disposal of medical waste, which increased significantly during the pandemic, the WtE sector also played a decisive role. As a response to this increase, several plant operators have implemented additional measures in the past few months. Thanks to the good disposal infrastructure in most parts of Europe, this kind of waste could be treated in an environmentally compatible and reliable manner in WtE plants.

In many regions of the world that do not have such capacities, the situation differs significantly.

### *Positive employee development*

In order to fulfil the challenging mission of an environmentally sound energy recovery, the WtE industry employs highly qualified personnel, and shows a tendency to further increase workforce in the next 12 months.

The employees of the industry were very happy about the appreciation bestowed upon them by the citizens during the crisis. Apparently, an intensified awareness has developed for the value of an efficient waste disposal system and the importance of the hygienic factor – not only, but especially in times of crisis.

CEWEP (Confederation of European Waste-to-Energy Plants) supported the ecoprolog Waste-to-Energy (WtE) survey also in 2020, a year strongly marked by the COVID-19 crisis, and, as in previous years, encouraged its members to participate.

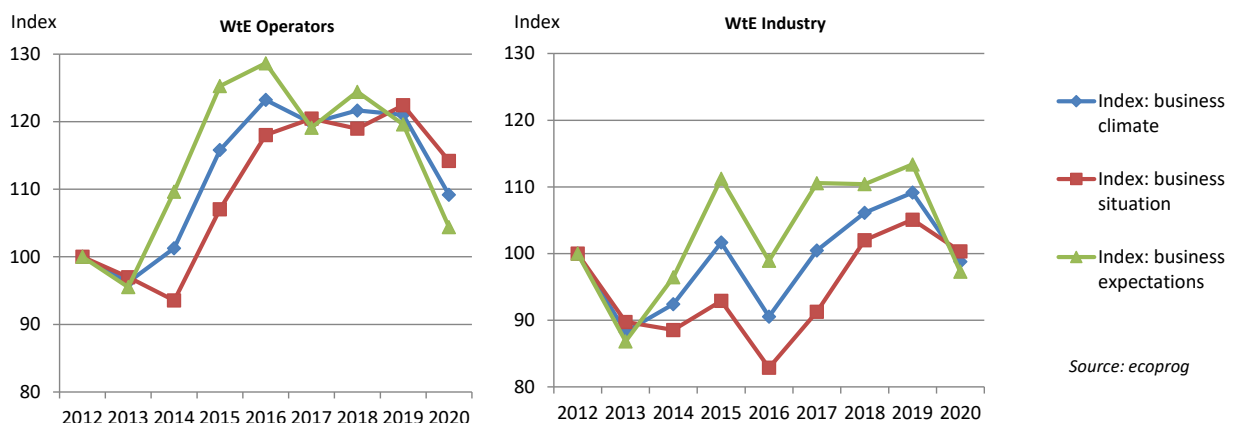
## WtE industry barometer: Industry defies COVID-19 crisis

The sentiment in the Waste-to-Energy (WtE) industry has significantly deteriorated as a consequence of the COVID-19 crisis. But compared to the overall economy, this slump remains clearly limited. Especially the operators of thermal waste treatment plants report comparably good business data. The current business situation is considered much better than is the case for the overall economy.

### Plant operators report stable business situation

With just under 25 out of a possible 100 points, the current business climate for WtE plant operators declines significantly compared to last year's all-time high, thus representing the poorest rating since 2014. Still, this figure clearly exceeds the reference value for the overall economy which, according to the ifo business climate index from August 2020 reaches only 2.4 points.

**Figure 1: Development of business climate for WtE operators and industrial WtE companies**



Especially the current business situation is still regarded by the operators as being comparatively positive. 95% of the operators assess the business situation to be good or satisfactory. 62% of the operators report a relatively high level of capacity utilisation for their plant, while only 3% refer to an insufficient capacity utilisation.

Despite the COVID-19 crisis, more than 80% of the plant operators indicate that capacity utilisation of their plant remained the same in the past 12 months, another 15% even reported an increase in capacity utilisation.

This is also due to the fact that waste quantities remained comparatively stable during the COVID-19 crisis.

The assessment of the coming months remains moderate as well. Even though the balance of business expectations turns out to be slightly negative (-5,6), there is in fact a tendency towards

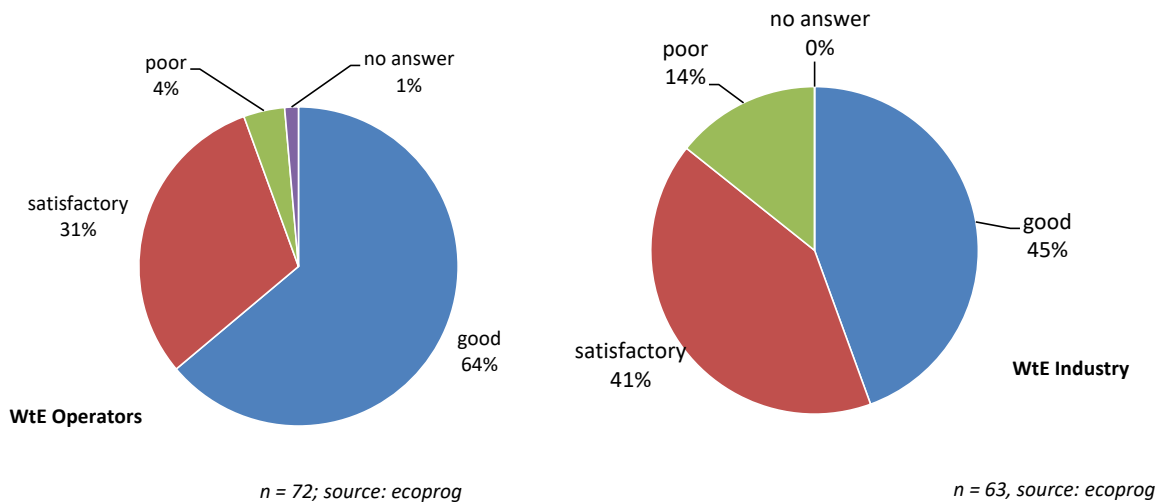
increasing prices and hiring more employees. The vast majority of the WtE plant operators expect a stable business situation.

### Industry remains optimistic

The WtE industry also assesses the situation rather moderately. With a balance of +23.7, the business climate is still perceived very positively although it deteriorated noticeably compared to last year's reference value (+47,2) which admittedly represented the all-time high of this survey carried out since 2012. Compared to the ifo value indicating a balance of 2.4, the assessments remain very positive.

**Figure 2: Business situation for operators and industry**

*How do you assess your current business situation?*



Despite the crisis, about three quarters of the industry report a sufficient or even high plant inventory. Approximately 40% of the respondents have even experienced a growing demand in the past 12 months, 32% state an increased volume of orders.

This development reflects the positive general market as represented in the previous years because of, for instance, increased waste amounts, the introduction of landfill bans or increased landfill taxes in different countries of the EU. In addition, an increasing modernisation of the by now aged plant inventory in Europe can be observed. So far, all these positive market factors with long-

term impacts have only been partially affected during the comparatively brief period of the COVID-19 crisis.<sup>1</sup>

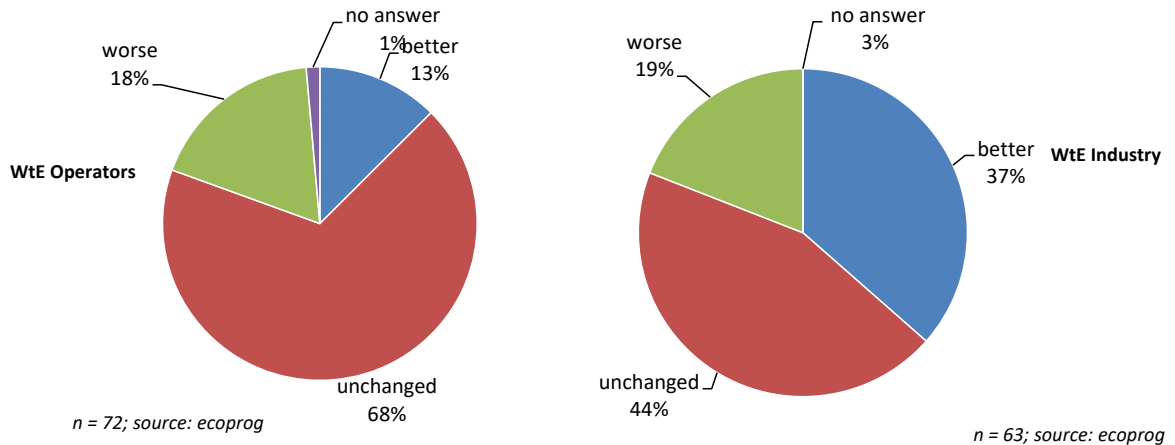
### Waste quantities during the crisis: Predominantly shifting

According to the WtE plant operators, waste amounts remained relatively stable during the COVID-19 crisis. More than 50% of all operators did not observe any substantial changes concerning the amounts of municipal and commercial wastes. Although about 30% report that commercial waste declined by up to 10%, 39% of the operators at the same time noticed that municipal solid waste quantities grew by a similar percentage. This logical results from the fact that more people stayed at home during the COVID-19 crisis due to short-time work or home office.

In addition to that, the market share of energy recovery is higher in the case of municipal solid waste as more mixed wastes accrue in this field which at present are not eligible for material recycling. It is true that there were clearly less manufacturing wastes during the crisis because, for instance, the factories were standing still – nevertheless, the market share of energy recovery is significantly lower for this latter kind of waste.

**Figure 3: Business expectations of operators and industry**

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



### Projects and tenders are postponed

The repercussions of the COVID-19 crisis on project activities differ. 17% of the plant operators state that repair and modernisation works are prioritised as far as this is possible under the

<sup>1</sup> These and all of the following interpretations are assessments made by ecoprolog. Therefore, ecoprolog is solely responsible for these statements.

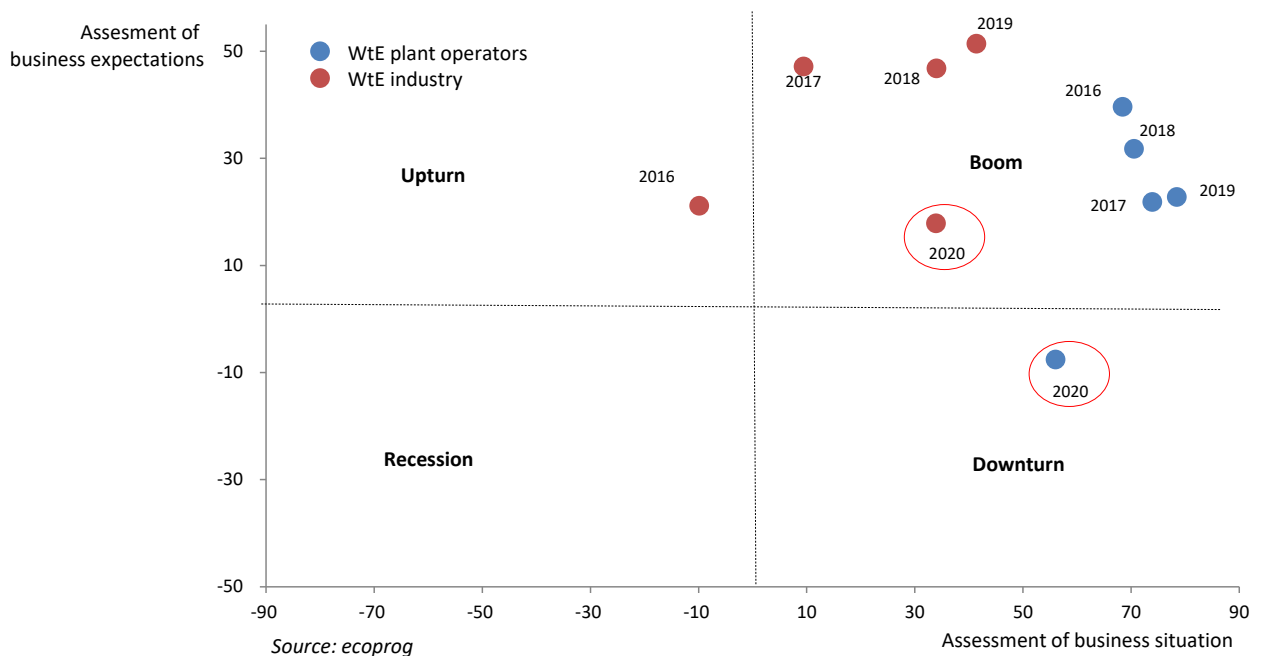
circumstances of the pandemic. Such measures are feasible if interruptions of plant operation lead to intermediate standstills. A similarly small proportion of the operators suffers from the fact that planned measures (e.g. those that need third-party employees) cannot be realised as intended as a consequence of the COVID-19 crisis. This is confirmed by those 70% of the industry respondents who report that projects already commissioned are being postponed or delayed, as a result of travel restrictions, amongst other reasons.

Almost 50% of the industry respondents say that awards have also been decreasing. Due to the existing volume of orders (and their complicated processing), this development can obviously still be cushioned in many places, as can be deduced from the positive business situation.

### Disposal of medical waste has increased

The importance of energy recovery of medical waste has significantly increased which is confirmed by 31% of the operators and corresponds to almost 50% of all the plants entitled to treat that kind of waste according to their acceptance catalogue. About 17% of all plants – that is about one quarter of all plants that are accepting medical waste – have introduced additional measures for this purpose in the last months.

**Figure 4: Classification of results**



## **Focus on Europe**

In 2020, as every year, the WtE industry has also been asked about the regional markets that are most important to them. As always, the European market is predominant in the responses to this question which this time is even more true as all other global markets have become, albeit only slightly, less important.

On the one hand, this is certainly due to the fact that primarily European companies have been interviewed in this survey, although many of them have a global presence. On the other hand, this assessment of course also reflects the positive market perception in Europe as expressed, for instance, by the WtE plant operators.

Eventually, projects in regions like India or the rest of Asia keep failing, e.g. due to financial constraints. This is all the more true in times of crisis as these days.

*The WtE industry barometer was elaborated for the first time in 2012. For the survey in 2020, we have questioned about 500 operators of thermal waste recovery plants and more than 700 plant manufacturers and suppliers in the WtE industry worldwide. Participants could choose to either complete an online questionnaire or to answer via fax. The survey was carried out between early August and early September.*

*ecoprolog GmbH carried out the survey and the evaluation. As a respected industry expert, ecoprolog 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.*

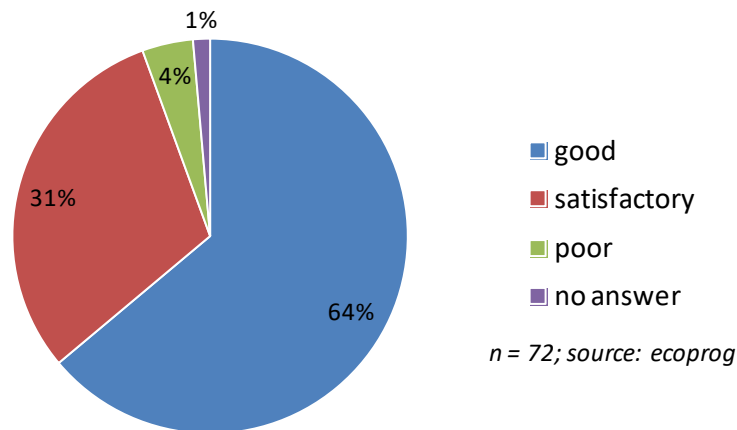


## **Annex: data**

## Survey of operators of Waste-to-Energy plants

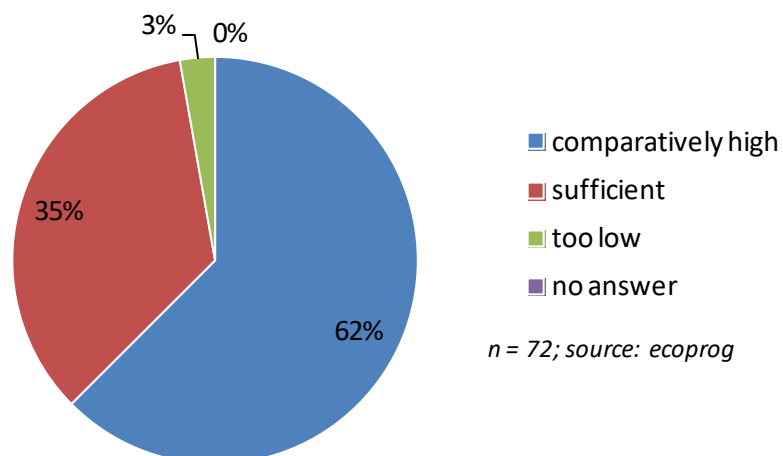
### Current business situation

*How do you assess your current business situation?*



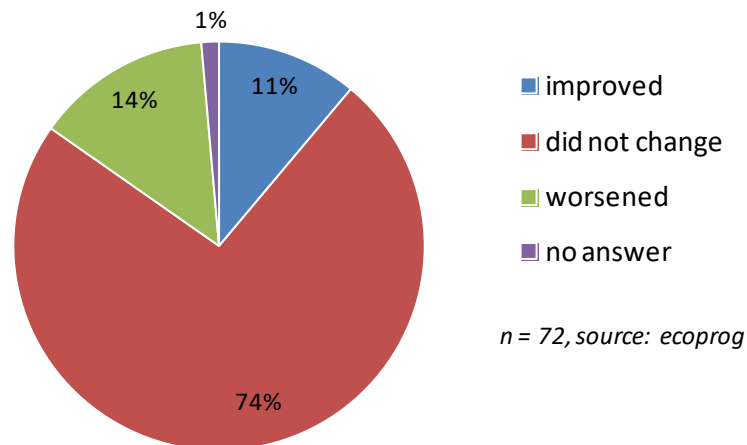
### Current utilisation

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



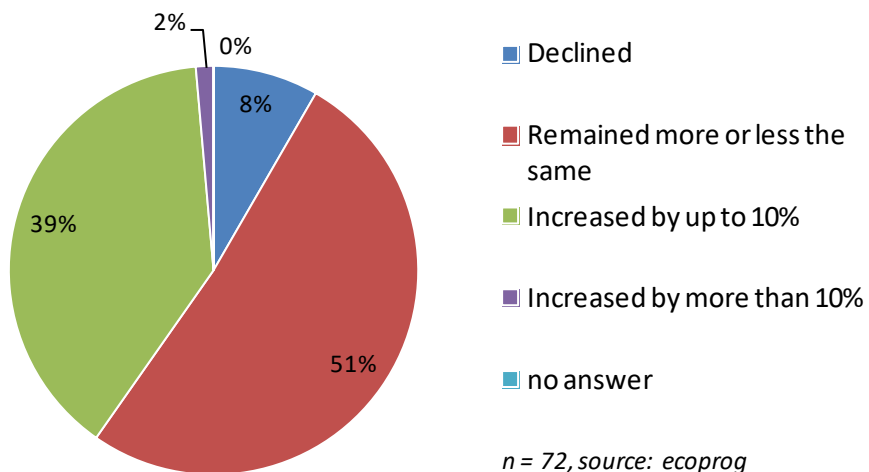
### Demand in the past 12 months

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



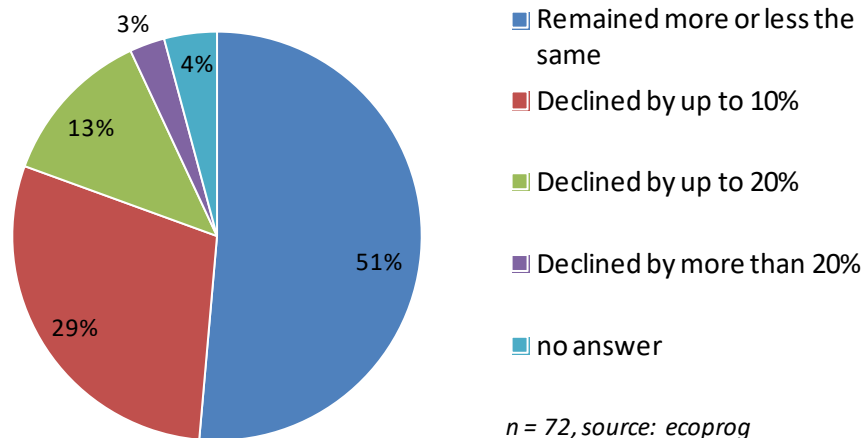
### Development of amount of MSW since the onset of the COVID-19 pandemic

*How did the amount of municipal solid waste at your plant develop since the onset of the COVID-19 pandemic in Europe in March of this year?*



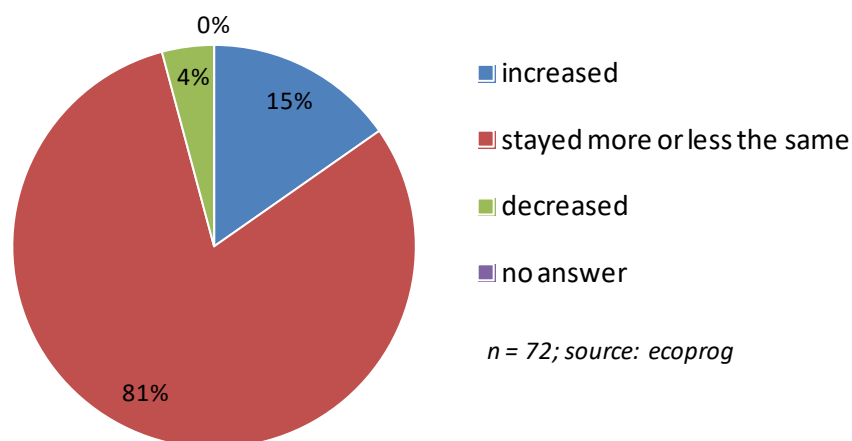
**Development of amount of commercial waste since the onset of the COVID-19 pandemic**

*How did the amount of commercial waste at your plant develop since the onset of the COVID-19 pandemic in Europe in March of this year?*



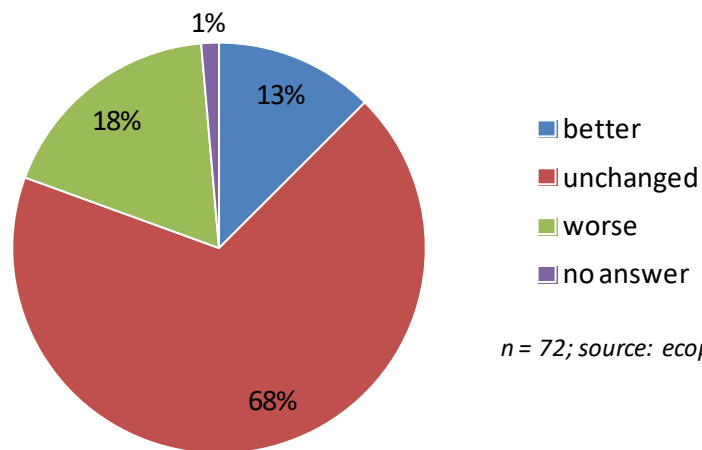
**Development of utilisation in the past 12 months**

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



## Business expectations

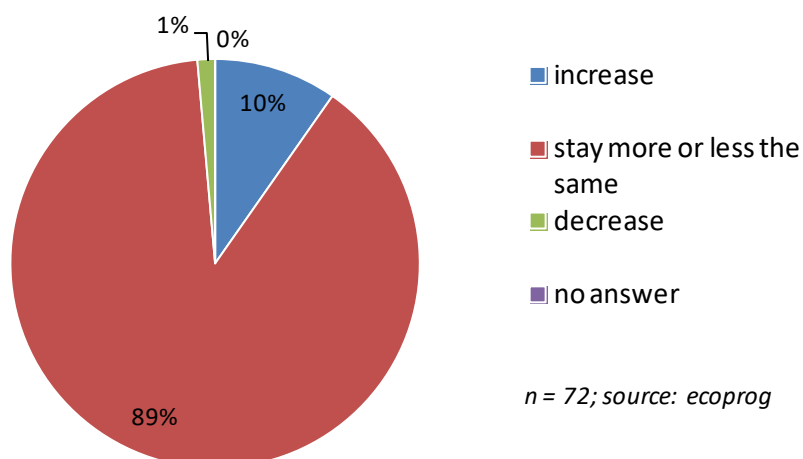
*How do you assess your business prospects for the next 12 months?*



*n = 72; source: ecoprogram*

## Employment

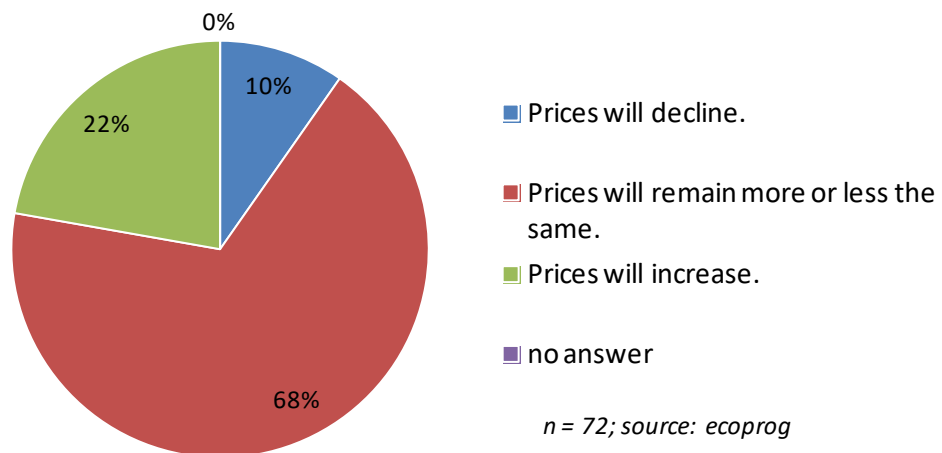
*In the next 12 months, the number of employees working for your company will ...*



*n = 72; source: ecoprogram*

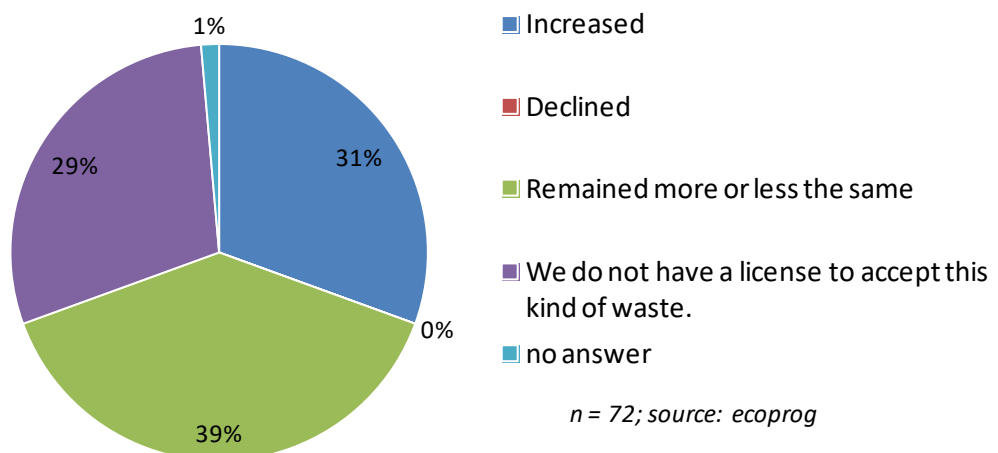
### Gate fees

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



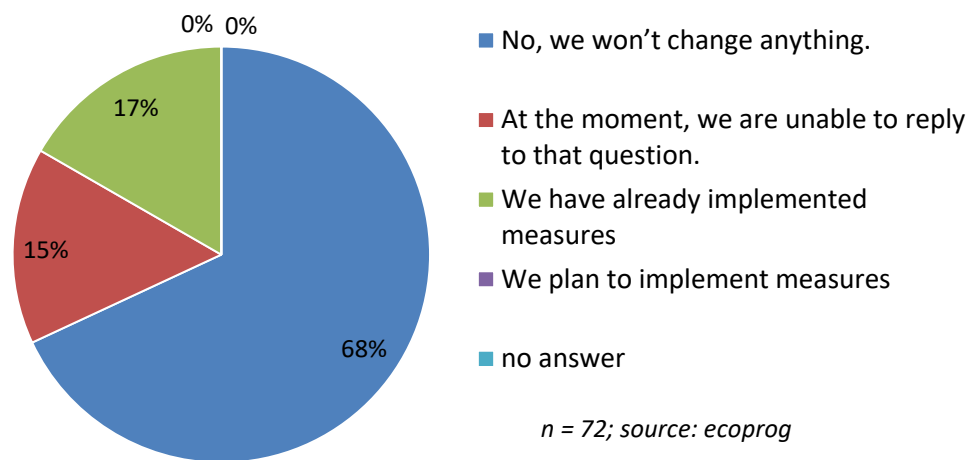
### Development of medical waste during COVID-19 crisis

*How did the amount of accepted medical waste develop during the COVID-19 crisis?*



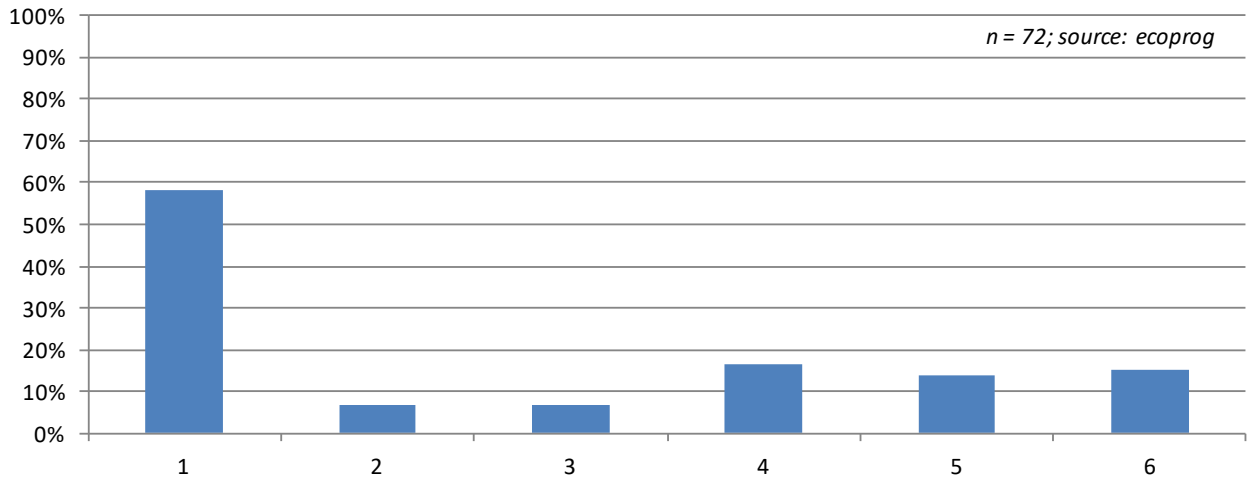
### Measurements for use of medical waste

*Have you taken any measures in order to be able to use medical waste more efficiently? Are you planning to do so in the future?*



### Impact of the crisis on plant operation

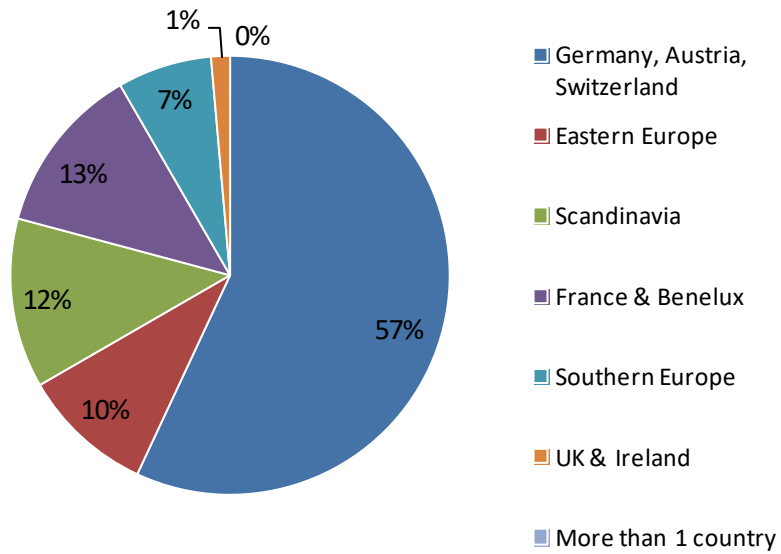
**What impact will the crisis have on the operation of your plant in the next 12 months? (multiple answers possible)**



- 1 None. We will continue as we did before.
- 2 We are discussing increased prices with suppliers in order to cushion losses.
- 3 We are working on further cutbacks, for instance regarding human resources and maintenance.
- 4 Maintenance and modernisation works will be prioritised to the extent possible under the pandemic's circumstances.
- 5 Planned investments will be postponed, amongst other reasons, because their implementation is not possible under the pandemic's circumstances.
- 6 We are not able to judge yet.

**Location of plants of survey participants by region**



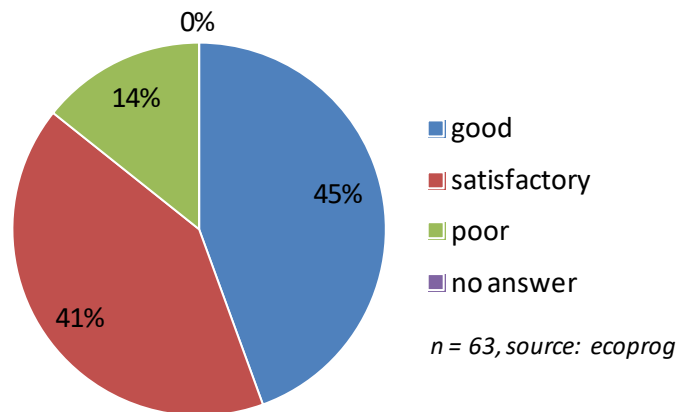


*n = 72; source: ecoprolog*

## Survey of industrial companies and WtE plant manufacturers

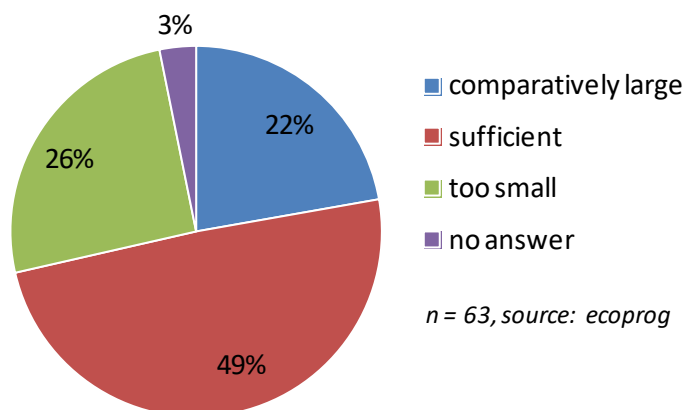
### Current business situation

*How would you describe your current business situation?*



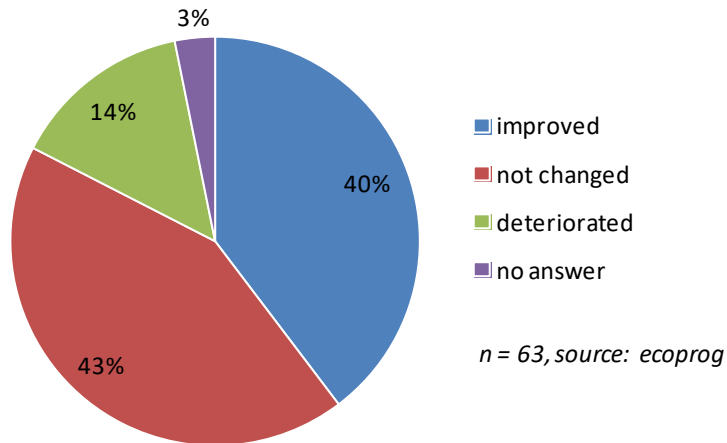
### Current order backlog

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



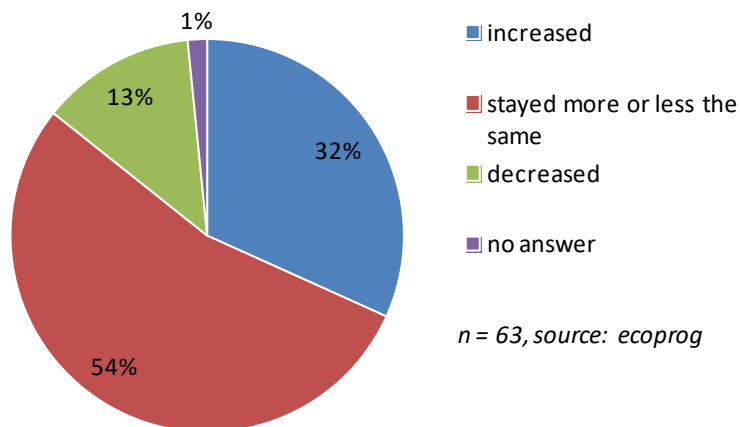
### Demand in the past 12 months

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



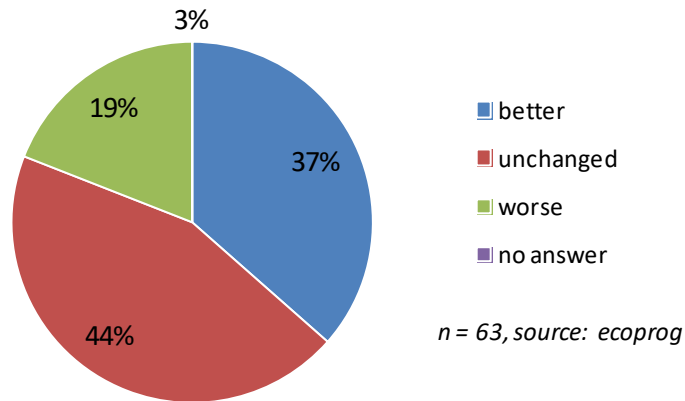
### Order backlog in the past 12 months

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



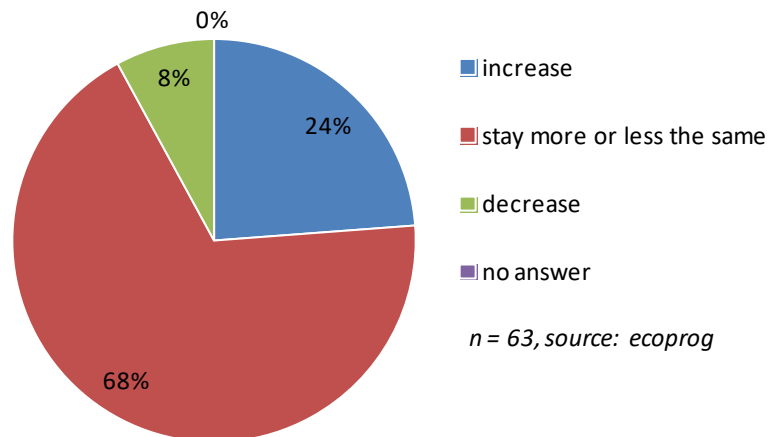
## Business expectations

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



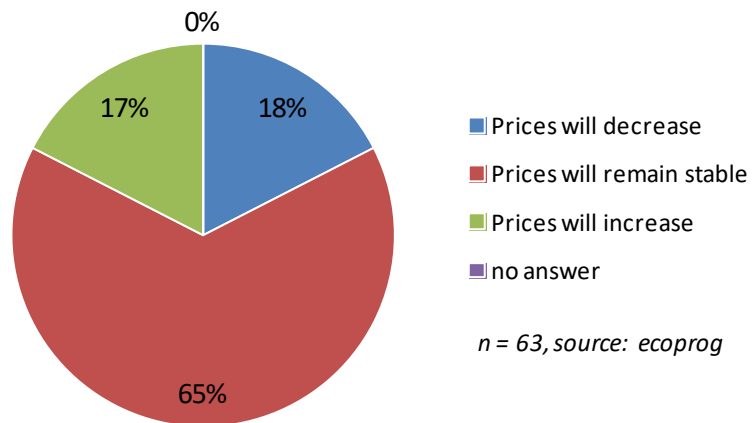
## Employment

*In the next 12 months, the number of your staff will ...*



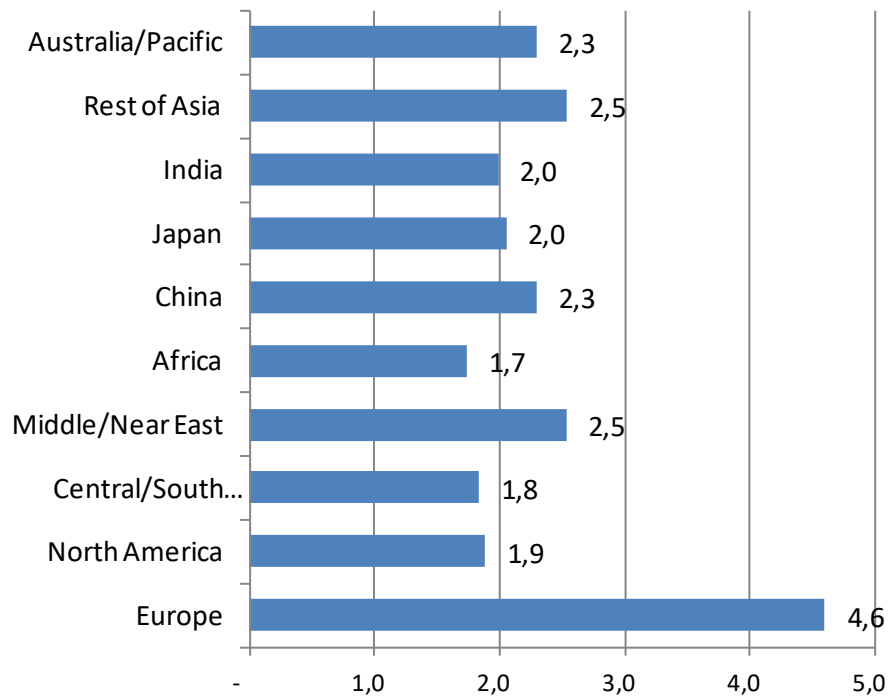
### Future price development

*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

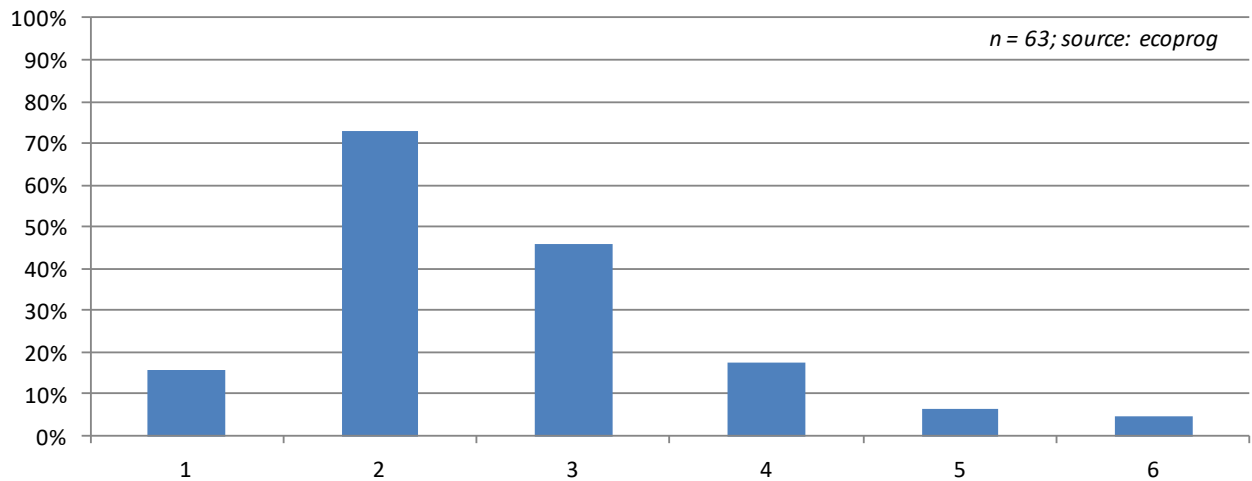
*How important are the following markets for your company today?  
(1=unimportant, 5=very important)*



*n = 63, source: ecoprolog*

## Effects of the crisis on business

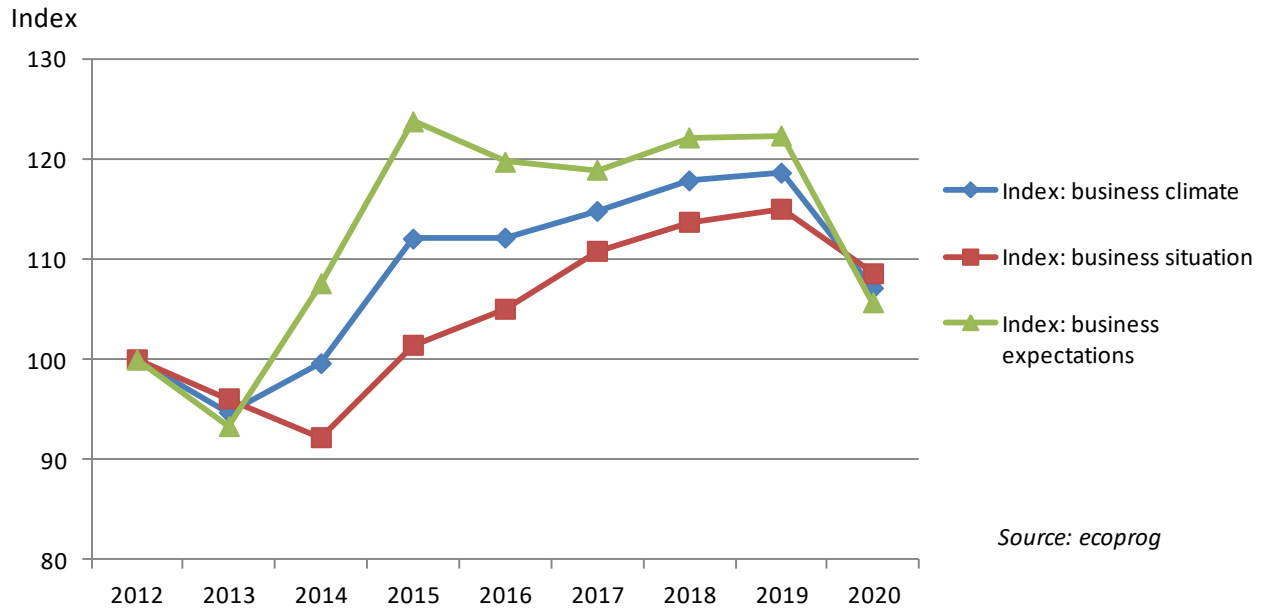
*What are the effects of the COVID-19 crisis on your business? (multiple answers possible)*



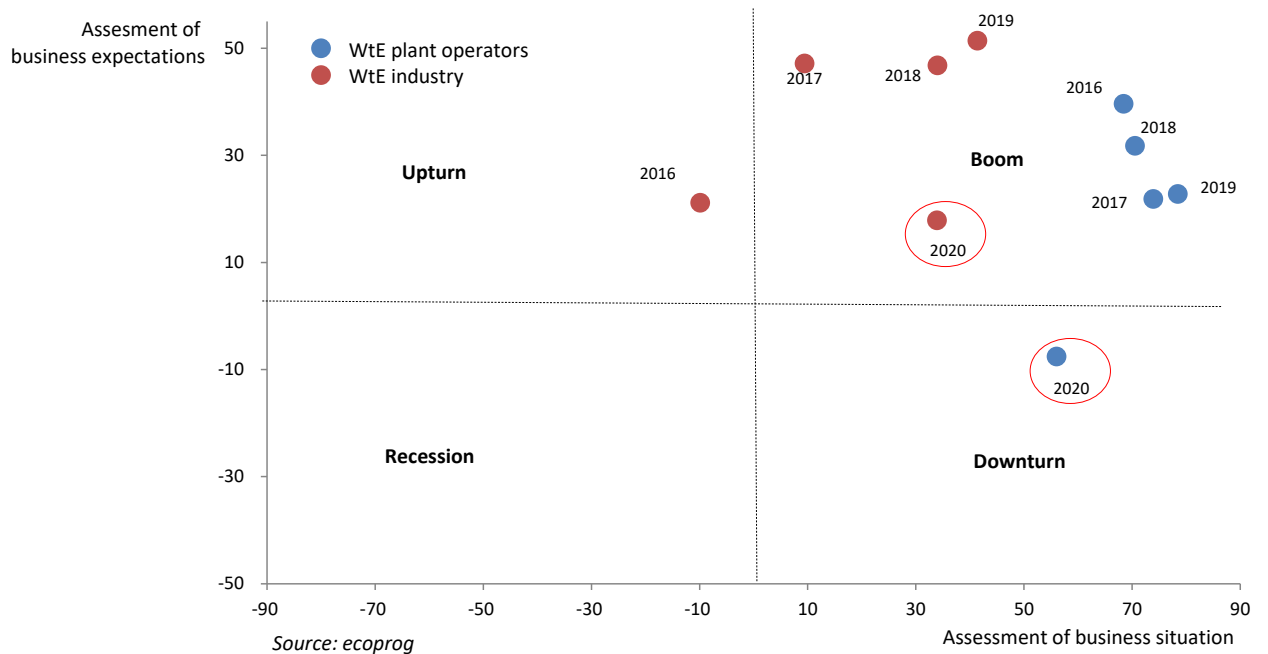
- 1 None.
- 2 Commissioned projects are postponed or delayed, for instance due to travel restrictions.
- 3 Order intake declined, for instance due to a smaller number of awards taking place.
- 4 There is a higher demand for short-term maintenance works in order to exploit possible shutdowns of plants.
- 5 There is an increased need for adaptation, as a consequence of, for instance, an increased percentage of medical waste.
- 6 We are not able to judge yet.

## Time series

### Industry barometer WtE plant operators & WtE industry

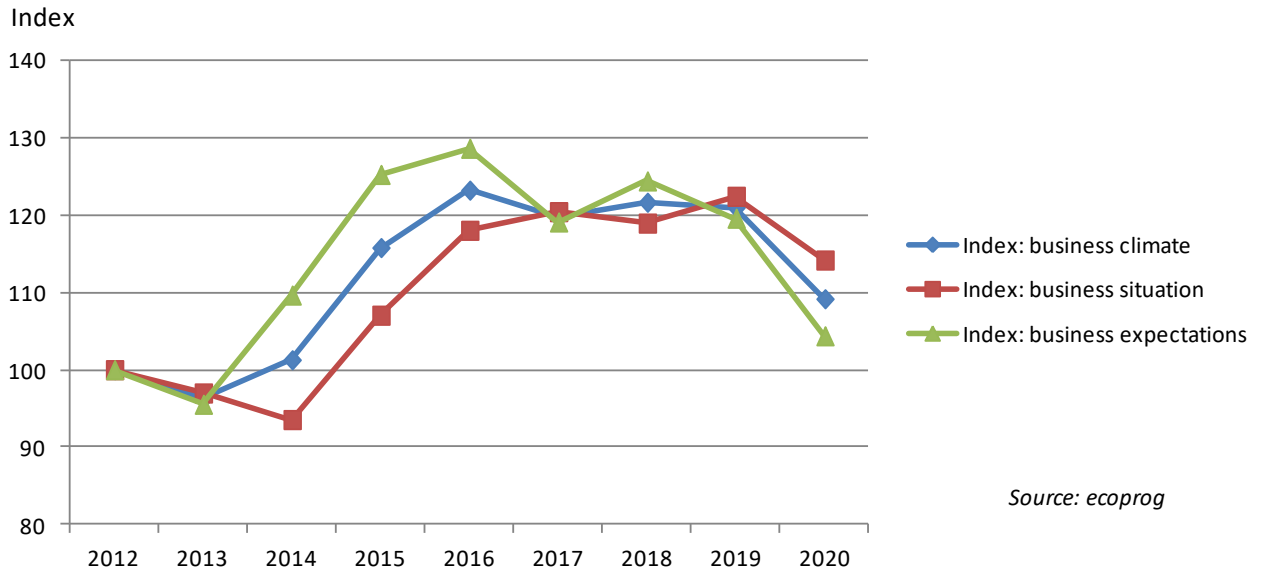


### Classification of results

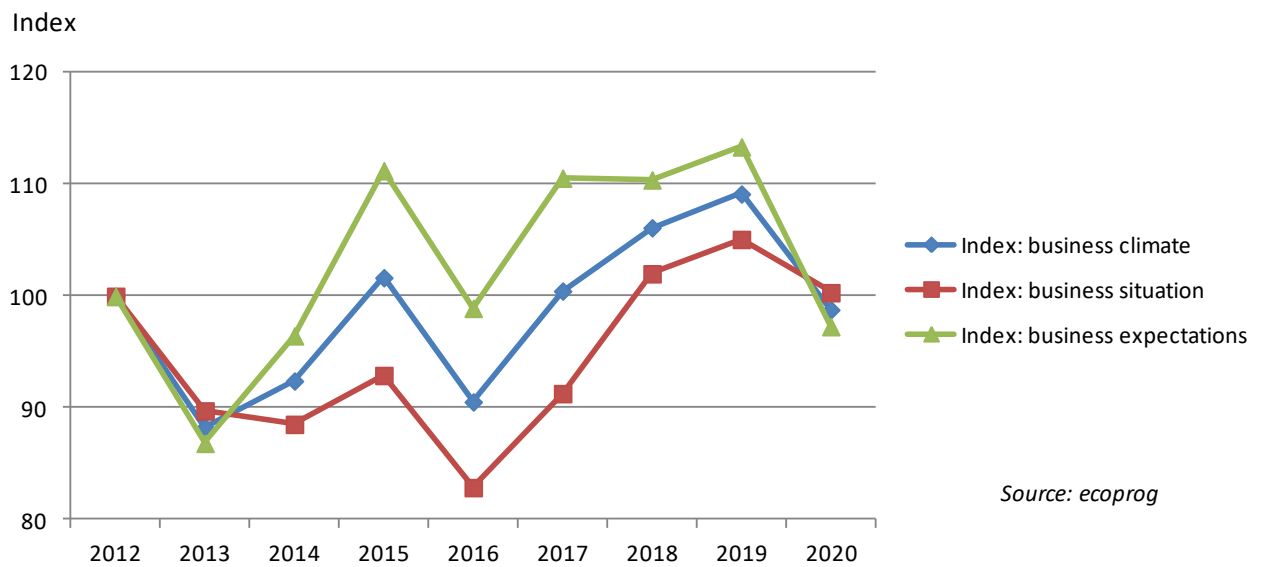




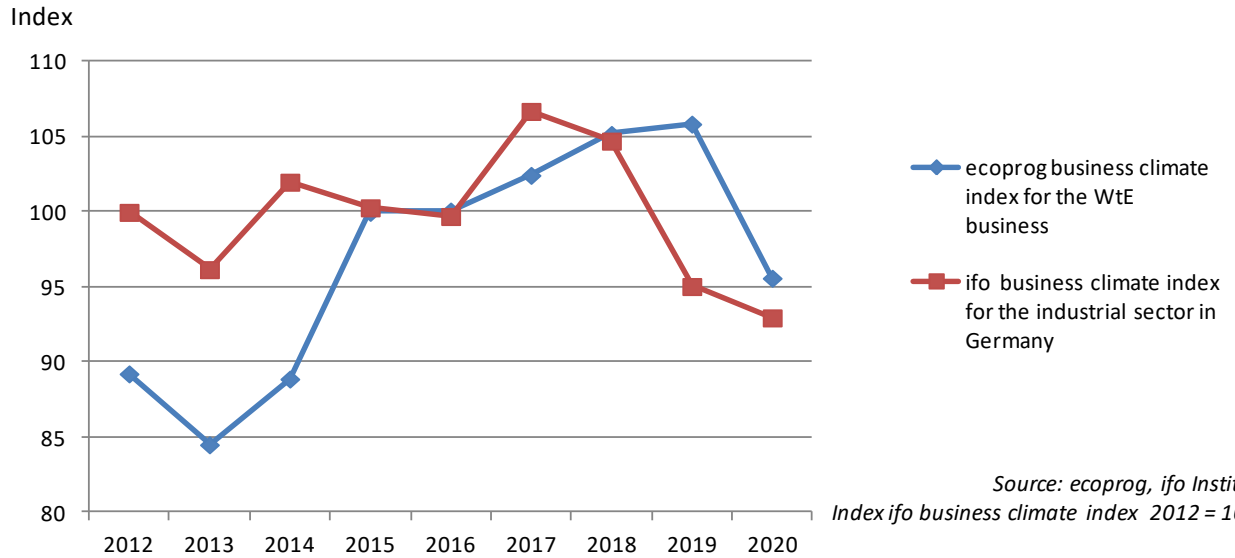
### Industry barometer WtE plant operators



### Industry barometer WtE industry



## Comparison to 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.

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