3rd Performance Report of Elected Dutch Municipalities of BNG Bank Sustainability Bond of November 2020

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Executive summary

In November 2020 BNG Bank launched its seventh Sustainability Bond, a new USD 1 billion 5-year benchmark with a coupon rate of 0.05%. The bond is due November 2025. The Framework document for the BNG Bank Sustainability Bond 2020 was provided to BNG Bank by Telos -Tilburg University- on 24 November 2020, describing the selection process of best-in-class Dutch municipalities eligible for the bond.

An important quality indicator of the bond is the 'Use of proceeds reporting (UPR)'. BNG Bank intends to include in the UPR a yearly impact report based on updated data for the sustainability scores of all Dutch municipalities. This update report gives insight in the changes in sustainability scores of the group of 111 elected municipalities compared to the total group of 342 municipalities in the Netherlands. BNG Bank asked Telos -Tilburg University- to provide the yearly impact reports for this bond, based on its yearly National Monitor Sustainable Municipalities. This performance report is the third impact report of the 2020 Sustainability Bonds, covering the years 2020-2023.

The elected municipalities continued to outperform the total group of municipalities with 2.3 percentage points (52.7 vs. 50.4), as listed in table 1. Both groups of municipalities show an improvement of the overall score with 1.8 percentage points. Largest improvements occurred this year for the economic capital (2.1 to 2.3 percentage points for both groups), while those for the socio-cultural capital and ecological capital were smaller (1.4 to 1.7 and 1.5 to 1.6 percentage points).

Table 1 Sustainability scores of 111 elected municipalities and of the total group of 342 Dutch municipalities in 2023 compared to 2020

Sustainability capital	Elected 2020	Total 2020	Elected 2023	Total 2023	Elected: Difference 2020-2023	Total: Difference 2020-2023
Total	51.0	48.6	52.7	50.4	1.8	1.8
Socio-cultural	50.6	48.2	52.1	49.8	1.5	1.6
Ecological	50.6	48.3	52.3	49.7	1.7	1.4
Economic	51.7	49.4	53.7	51.8	2.1	2.3

A closer look at the CO2 reductions shows that the group of elected municipalities realized a reduction in CO2 emissions over the last year; which emissions decreased by 6.5%. The other municipalities realized CO2 emission reductions of 6.1%. The outcome of this analysis is shown in table 5.3.

Scores of municipalities are rather dynamic from year to year, although major differences and advantages among municipalities are of a structural nature. In the reporting period the elected municipalities Leusden, Rheden, Oegstgeest and Oisterwijk were able to improve their total sustainability score most. The largest reduction in sustainability score among elected municipalities was detected in Schiermonnikoog, followed by Almere.

Comparison from 2020 to 2023 for the elected group, as shown in table 6.1, makes clear that the performance of several SDGs improved slightly or substantially (SDGs 1, 3, 4, 5, 7, 8, 9, 10, 12, 13, 14 and 16) but others showed a slight decrease or stayed the same (SDGs 2, 11 and 15).

The elected group of municipalities outperforms the total group on 8 of the 15 measured SDGs, but the differences become smaller. On 4 of the 15 SDGs the elected group showed a higher increase or smaller decline over the reported period than the total group.

There are not many significant differences in the development of the scores between the two groups as for most goals both groups have a very similar percentage points decrease or increase.

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1 Introduction

At the request of BNG Bank, Telos -Tilburg University, has provided a Framework document on 24 November 2020 to BNG Bank[1] that describes the sustainability criteria and selection process of best-in-class Dutch municipalities eligible for a BNG Bank Sustainability Bond 2020. Telos developed this framework based on its National Monitor of Sustainable Municipalities 2020, from which the 7th edition was presented in November 2020. The National Monitor of Sustainable Municipalities was produced for the first time in 2014 on behalf of the Dutch Ministry for Infrastructure and Environment.

Per November 24, 2020, BNG Bank launched its seventh Sustainability Bond, a new USD 1 billion, 5-year benchmark[2]. The bond has its maturity date on November 24th 2025. An important quality indicator of these bonds is the 'Use of proceeds reporting (UPR)'. BNG Bank intends to include in the UPR a yearly impact report based on updated data for the sustainability scores of all 342 Dutch municipalities. The update will give insight in the changes in sustainability scores of the group of 111 Elected Municipalities. Besides this impact report, other aspects are relevant for UPR, such as types of investment projects, governance aspects in relation to the sustainability performance of municipalities, etc. These other aspects are not included in this assessment by Telos, because such data are not yet available in sufficient detail. BNG Bank has asked Telos to provide the yearly updating of the database over the lifetime of the bond and report on the annual changes in scores of the Elected Municipalities. This is the third of such reports on the 2020 bonds, covering the period 2020-2023. It describes how the performance is assessed, the general outcome of the comparison over the years 2020-2023, including the impact with regard to CO2-emissions. Additionally, this report gives insight in the development of the elected municipalities on the UN Sustainable Development Goals (SDGs).

[1] https://www.bngbank.com/-/media/Project/CBB/BNG-Bank-COM/Documents/Sustainability-Framework-2020.pdf?la=en&rev=25c3308f8f824ddd91923f9c5b9e792d&hash=25CC7B4587058F7AABF537F45330AC39

[2] https://www.bngbank.com/Funding/ESG-Bonds

2 Description of activities

2.1 Update of database

First step for this update impact report was to update the database for the sustainability assessment of Dutch municipalities used in the National Monitor Sustainable Municipalities 2023. The monitor is in its essence designed on the basis of the UN and EU concept of sustainable development, which implies that three dimensions of development are considered of equal importance: economic, socio-cultural and ecological. Each of these three 'capitals' are subdivided into themes, called 'stocks', which are operationalized by measuring 'indicators'. Indicator values are assessed against sustainability goals, as described in more detail in the National Monitor report. These sustainability goals have been developed independently from the later agreed UN Sustainable Development Goals (SDGs) in 2015. A detailed analysis of the comparability and differences by Telos, as described in the National Monitor of 2017[3], has shown that these goals have a wide similarity.

The United Nations SDGs include a set of 17 goals that cover, more categorized from a policy than from a scientific point of view, urgent tasks to be addressed by national governments, local authorities and private actors. A detailed analysis of the differences and overlaps between the triple P approach, used in this framework, and the 17 SDGs shows that a large part of the indicators are the same, but for some goals clear differences occur. SDG 14 on seas and oceans is for example not included because this is not relevant for municipalities. Governance issues, as implemented by partnerships, have explicitly not yet been included in the triple P approach, amongst others because of the different nature of this domain and because comparable data are difficult to collect. The basic structure of the triple P model will be kept as leading in this impact report, as it better represents a structure that can be founded and explored scientifically. Like in the 2020 framework report, the relevant indicators will also be used to assess the progress on the SDGs for the municipalities.

The updating activities include:

1. Motivation of new sustainability stocks, indicators and goals for indicators to meet new scientific insights and practical developments.
2. Generating most recent data for the indicators used in the National Monitor Sustainable Municipalities from open public sources or by acquiring them.
3. Eventual reassessment of city typology (this was not needed in the recent version of the Monitor).
4. Harmonization with national monitoring activities by third parties on theme specific issues such as climate, mobility, health, etc.
5. Adjustment to the outcome of municipality rearrangements, which are continuously resulting in larger municipalities and a lower total number of municipalities.

[3] Bastiaan Zoeteman, John Dagevos, Rens Mulder, Corné Wentink, Naomi Hoven, Christien Visser, 2017, Nationale Monitor Duurzame Gemeenten 2017, Document number 17.170, Telos, Tilburg University, 29 September; http://www.telos.nl/publicaties/publicatiesrapporten/default.aspx#folder=894859

The National Monitor Sustainable Municipalities 2020 discerned 14 municipality types. These 14 types have been used for the Framework of the BNG Bank Sustainability Bond of 2020 and are the basis for the performance report at hand.

2.2 Assessment of performance of elected sustainable municipalities

Based on the updated database, sustainability performance of 114 elected municipalities in 2020 will be evaluated and discussed. The group of elected municipalities, described in the Framework of the BNG Bank Sustainability Bond of October 2020, has been selected by identifying the 15 best scoring municipalities for each of 14 types of cities, such as 'agricultural', 'old industrial', 'shrinking', etc. municipalities. The 114 elected municipalities have been selected out of the total number of 355 municipalities in the Netherlands in 2020. Since 2023, rearrangements among the municipalities were made and there are currently only 342 municipalities in the Netherlands. The municipalities of Grave, Langedijk and Boxmeer are no longer independent entities. They are therefore no longer taken in consideration in this performance report. That means that the group of elected municipalities now consists of 111 municipalities.

Furthermore, the number of indicators was expanded due to new possibilities but also reduced due to lack of continued data collection, resulting in 147 indicators now, compared to 140 in 2020. Such changes had to be included in the comparison between 2023 and 2020. Where needed new data for 2020 were separately collected and calculated. The reader is referred to the Method report for the 2023 BNG Bank Sustainability bond[4] for the details of the amendments made in the calculation of the sustainability scores and how comparability between the years 2020 and 2023 was ascertained.

The assessment in this report includes:

1. A comparison of sustainability scores of elected municipalities with the total group of Dutch municipalities for 2020 and 2023.
2. A comparison of sustainability scores for elected municipalities between 2020 and 2023, including:
    a. overall scores
    b. capital scores, and a selection of:
    c. stock scores and where useful
    d. indicator scores.
3. A list of elected municipalities, which show the largest improvement or reduction in overall score and in CO2 emissions.
4. An overview of the development on the SDGs of the elected municipalities between 2020 and 2023.

In the next chapters, the outcome of these activities is presented. Finally, the overall changes observed for reporting period 2020-2023 will be discussed.

[4] www.hetpon-telos.nl/methodreport2023

3 Outcome of updating exercise and comparison of 2020 and 2023

3.1 National Monitor Sustainable Municipalities 2023

In May 2023, Het PON & Telos completed the data collection for the National Monitor Sustainable Municipalities 2023. The overall outcomes are shown in table 3.1:

Table 3.1 Sustainability performance of the total group of Dutch municipalities in 2020-2023

Sustainability capital	2020	2021	2022	2023
Total	48.64	49.82	50.23	50.42
Socio-cultural	48.22	48.48	49.30	49.79
Ecological	48.30	49.78	50.42	49.70
Economic	49.42	51.19	50.99	51.77

In the last two years the average overall sustainability score improved from 48.64 to 50.42 percentage points (on a scale 0-100). This was due to improvements in all capitals. The economic capital improved the most over the period 2020-2023, from 49.42% to 51.77%. The socio-cultural capital improved from 48.22% to 49.79% and the ecological capital improved from 48.30% to 49.70%.

3.2 General characteristics of elected municipalities for the BNG Bank Sustainability Bond 2020

The group of elected municipalities represents the sum of highest scoring municipalities in each of the 14 types of municipalities considered. They are therefore not a representative sample of the total group of Dutch municipalities. This is illustrated in table 3.2, using municipality size as criterion.

Table 3.2 Distribution of municipality sizes in the Netherlands and in the group of elected municipalities

Municipality size (number of inhabitants)	Total number of municipalities in the Netherlands	Total number of municipalities in elected group
Less than 50,000	250 (73.1%)	81 (73.0%)
50,000-100,000	60 (17.5%)	15 (13.5%)
More than 100,000	32 (9.4%)	15 (13.5%)

As table 3.2 shows, the size distribution of the elected group of municipalities differs from the average distribution in the country. The small and midsize municipalities are underrepresented, while the large municipalities are overrepresented in the elected group. In case the outcome for the elected group is compared with the total group of municipalities this has to be taken into account.

3.3 General performance of elected municipalities compared to total group of Dutch municipalities

BNG Bank has chosen to allocate the proceeds of the Sustainability Bond to the best performing municipalities for several reasons. These include:

- Highlighting the importance of sustainable development to municipalities,
- Enabling investors that want to see their capital used for investments in municipalities that have experience in improving sustainability, and
- Increasing awareness of successful strategies used in high scoring municipalities, etc.

It would be welcome, against this background, if the comparison between performance of the group of elected municipalities and the total group of Dutch municipalities would show that the elected municipalities outperform the others over the years. Yet, it may not be as simple as that. Best performing municipalities may not have as much opportunities left for further improvement as low performing municipalities, which can more easily improve their performance.

Table 3.3 gives a summary of the overall differences between 2020 and 2023 for the total group of Dutch municipalities and the group of elected municipalities. It shows the general trend, which for both groups is an improvement of the overall score with 1.8 percentage points.

Table 3.3 Sustainability performance of elected municipalities and of the total group of Dutch municipalities in 2020 compared to 2023 (percentage points)

Sustainability capital	Elected 2020	Total 2020	Elected 2023	Total 2023	Elected: Difference 2020-2023	Total: Difference 2020-2023
Total	51.0	48.6	52.7	50.4	1.8	1.8
Socio-cultural	50.6	48.2	52.1	49.8	1.5	1.6
Ecological	50.6	48.3	52.3	49.7	1.7	1.4
Economic	51.7	49.4	53.7	51.8	2.1	2.3

The elected municipalities continued to outperform the total group of municipalities with 2.3 percentage points (52.7 vs. 50.4), as listed in Table 1. The largest improvements occurred this year for the economic capital (2.1 to 2.3 percentage points for both groups), while those for the socio-cultural capital and ecological capital were smaller (1.4 to 1.7 and 1.5 to 1.6 percentage points). In the next paragraph, the more detailed stock scores are considered.

3.4 Changes in stock scores of elected and the total group of municipalities

A closer look at the level of stocks (table 3.4) shows that differences between the years show a similar pattern in both groups of municipalities.

Table 3.4 Differences in sustainability scores (percentage points) of stocks between 2020 and 2023 for the group of elected municipalities and all Dutch municipalities

Sustainability stock	Difference 2020-2023 of 111 elected municipalities	Difference 2020-2023 of all 344 municipalities
Socio-cultural		
Arts & culture	0.0	0.0
Economic participation	9.8	10.1
Education	0.7	0.6
Health	1.4	1.4
Housing	-3.0	-2.7
Lifestyle and health	2.0	2.4
Political Participation	2.3	1.7
Residential environment	-2.3	-1.7
Safety	5.8	5.2
Social participation	-1.3	-1.2
Ecological		
Air	1.7	1.6
Annoyance and External safety	0.0	0.3
Energy	2.6	2.7
Nature & landscape	0.0	0.0
Soil	3.0	1.8
Resources & waste	1.1	1.3
Water	3.1	2.1
Economic		
Competitiveness	4.2	4.5
Infrastructure & mobility	3.9	4.3
Knowledge	2.4	2.6
Labor	2.5	2.5
Spatial location conditions	-2.6	-2.2

Socio-cultural stocks

Most significant are the differences in improvement in the stock 'Economic participation': the elected groups score improved with 9.8 percentage points and the total group with 10.1 percentage points. The stock 'Safety' improved for the elected group by 5.8 percentage points and the total group by 5.1 percentage points. The decreases in 'Social participation', 'Residential environment' and 'Housing' are somewhat at odds with what might be expected in times of economic growth.

Ecological stocks

Also for this stock, the group of elected municipalities shows a similar pattern as the total group of municipalities, with large improvements during the period 2020-2023 for the

stocks of ‘energy’, ‘water’ and ‘soil’. ‘Nature and landscape’ stayed the same, while the stocks ‘Air’ and ‘Resources and waste’ showed small increases.

Economic stocks

Elected municipalities improved slightly less than the total group of municipalities. The biggest improvement is found in ‘Infrastructure & Mobility’ and ‘Competitiveness’, while ‘Spatial location conditions’ shows a decline.

4 Elected municipalities showing largest improvement or reduction in sustainability score in 2020-2023 depending on city typology

In this chapter, a closer examination of the improvements or reductions in total sustainability score of individual elected municipalities will be discussed. The assessment will be presented for each of the 14 types of municipalities that are discerned in the Framework for the BNG Bank Sustainability Bond of 2020: agricultural-, center-, green-, growth-, historic-, old industrial-, mid-sized-, New Town-, shrink-, small, residential, tourist, work- and 100,000plus municipalities. The list of best-in-class municipalities in each type of municipalities will be presented as described in the framework document. The scores for 2020 have in this assessment been corrected for additional indicators used in 2023 to make them comparable with the 2020 data. The results are therefore sometimes differing from those given in the 2020 Framework document.

4.1 Elected agricultural municipalities

Table 4.1 presents the 14 best-in-class municipalities of the agricultural type, their reconstructed 2020 scores and the 2023 scores for total sustainability. All municipalities improved their score. Tynaarlo improved the most in the period 2020-2023, with 2.8 percentage points. Overall, the score of the group of elected agricultural municipalities improved 1.8 percentage points since 2020.

Table 4.1 Improvements and reductions in total sustainability scores of elected agricultural municipalities over 2020-2023

Agricultural municipality	Sustainability score 2020	Sustainability score 2023	Difference
Tynaarlo	52.2	55.0	2.8
Raalte	51.9	54.4	2.5
Dalfsen	53.3	55.4	2.1
Tubbergen	50.6	52.7	2.1
Hof van Twente	51.8	53.7	1.9
Bunnik	52.5	54.3	1.8
Zwartewaterland	51.4	53.2	1.8
Midden-Delfland	52.3	53.9	1.6
Staphorst	53.7	55.3	1.6
Berkelland	51.6	53.2	1.6
Wijk bij Duurstede	52.3	53.9	1.6
Dinkelland	54.0	55.5	1.5
Wierden	52.8	54.2	1.4
Oost Gelre	52.7	53.9	1.2
Average	52.4	54.2	1.8

4.2 Elected center municipalities

As table 4.2 shows, all municipalities in this sub-group improved their score the last years. Katwijk improved the most, with 2.8 percentage points, followed by Deventer, Apeldoorn and Hilversum. Overall, the score of the group of elected center municipalities improved with 1.7 percentage points.

Table 4.2 Improvements in total sustainability scores of elected center municipalities over 2020-2023

Center municipality	Sustainability score 2020	Sustainability score 2023	Difference
Katwijk	50.9	53.7	2.8
Deventer	50.4	52.6	2.2
Apeldoorn	52.2	54.4	2.2
Hilversum	49.2	51.4	2.2
Gouda	48.9	51.1	2.2
Utrecht	52.4	54.5	2.1
Groningen	50.0	51.9	1.9
Castricum	51.6	53.4	1.8
Nijmegen	52.9	54.6	1.7
Zwolle	52.1	53.8	1.7
Arnhem	50.1	51.5	1.4
Ede	52.9	54.1	1.2
Huizen	50.8	51.9	1.1
Delft	51.2	52.1	0.9
Gooise Meren	49.6	50.2	0.6
Average	51.0	52.7	1.7

4.3 Elected green municipalities

Elected green municipalities on average improved by 1.8 percentage points, as shown in Table 4.3. Leusden improved the most with 4.4 percentage points, followed by Noordwijk, Bloemendaal and Elburg.

Table 4.3 Improvements and reductions in total sustainability scores of elected green municipalities over 2020-2023

Green municipality	Sustainability score 2020	Sustainability score 2023	Difference
Leusden	52.6	57.0	4.4
Noordwijk	53.1	56.3	3.2
Bloemendaal	52.3	55.2	2.9
Elburg	51.7	54.0	2.3
Ommen	52.7	54.8	2.1
Nunspeet	51.0	53.1	2.1
Heeze-Leende	52.5	54.3	1.8

Waalre	51.7	53.4	1.7
Bladel	52.2	53.6	1.4
Mook en Middelaar	52.7	54.0	1.3
Hilvarenbeek	52.9	53.9	1.0
Terschelling	52.2	53.2	1.0
Vlieland	54.7	55.5	0.8
Putten	50.8	51.4	0.6
Westerveld	50.6	51.1	0.5
Average	52.2	54.1	1.8

4.4 Elected growth municipalities

The elected growth municipalities showed an improvement of 1.4 percentage point last year. One municipality (Urk) did not improve its score. Highest improvement was found for Heeze-Leende, Leusden, followed by Noordwijk and Houten.

Table 4.4 Improvements and reductions in total sustainability scores of elected growth municipalities over 2020-2023

Growth municipality	Sustainability score 2020	Sustainability score 2023	Difference
Leusden	52.6	57.0	4.4
Oegstgeest	51.3	54.7	3.4
Noordwijk	53.1	56.3	3.2
Bloemendaal	52.3	55.2	2.9
Zeewolde	50.7	52.8	2.1
Houten	52.9	54.9	2.0
Bunnik	52.5	54.3	1.8
Heeze-Leende	52.5	54.3	1.8
Nijmegen	52.9	54.6	1.7
Midden-Delfland	52.3	53.9	1.6
Woudenberg	52.9	54.3	1.4
Delft	51.2	52.1	0.9
Wageningen	55.2	55.8	0.6
Blaricum	52.4	53.0	0.6
Urk	52.0	52.3	0.3
Average	52.5	54.4	1.9

4.5 Elected historic municipalities

One municipality in this sub-group showed a decline in municipality score over the past year, which is Schiermonnikoog. Rheden, Leiden and Zutphen improved the most over the reported period. The average score improved last year with 1.7 percentage points, as presented in Table 4.5.

Table 4.5 Improvements and reductions in total sustainability scores of elected historic municipalities over 2020-2023

Historic municipality	Sustainability score 2020	Sustainability score 2023	Difference
Rheden	49.6	53.7	4.1
Leiden	48.6	51.8	3.2
Zutphen	51.7	54.4	2.7
Hilversum	49.2	51.4	2.2
Utrecht	52.4	54.5	2.1
Molenlanden	51.1	52.8	1.7
Staphorst	53.7	55.3	1.6
Eijsden-Margraten	49.2	50.8	1.6
Bronckhorst	54.0	55.5	1.5
Arnhem	50.1	51.5	1.4
Kampen	52.0	53.1	1.1
Delft	51.2	52.1	0.9
Vlieland	54.7	55.5	0.8
Ameland	52.1	52.9	0.8
Schiermonnikoog	51.5	51.0	-0.5
Average	51.4	53.1	1.7

4.6 Elected mid-sized municipalities

Table 4.6 shows that mid-sized municipalities improved their sustainability scores on average by 1.9 percentage points over the last years. Each of the underlying municipalities improved their score. Woerden, Heerenveen, Katwijk and Westkwartier improved with 2.5 percentage points or more, of which most in the past two years.

Table 4.6 Improvements and reductions in total sustainability scores of elected mid-sized municipalities over 2020-2023

Mid-sized municipality	Sustainability score 2020	Sustainability score 2023	Difference
Woerden	49.7	52.8	3.1
Heerenveen	50.6	53.5	2.9
Katwijk	50.9	53.7	2.8
Westerkwartier	49.9	52.6	2.7
Pijnacker-Nootdorp	50.3	52.7	2.4
Hilversum	49.2	51.4	2.2
Gouda	48.9	51.1	2.2
Houten	52.9	54.9	2.0
Barneveld	52.3	54.1	1.8
Hengelo	49.1	50.7	1.6
Krimpenerwaard	50.3	51.7	1.4
Kampen	52.0	53.1	1.1

Amstelveen	51.1	52.1	1.0
Altena	49.4	50.4	1.0
Gooise Meren	49.6	50.2	0.6
Average	50.4	52.3	1.9

4.7 Elected New Town municipalities

Elected New Town municipalities on average improved their score with 1.8 percentage points (see table 4.7). Culemborg improved its score with 2.9 percentage points, followed by Pijnacker-Nootdorp (2.4), Zeewolde, Tubbergen, Harderwijk and Nijkerk (all an improvement of 2.1 percentage points).

Table 4.7 Improvements and reductions in total sustainability scores of elected New Town municipalities over 2020-2023

New Town municipality	Sustainability score 2020	Sustainability score 2023	Difference
Culemborg	50.0	52.9	2.9
Pijnacker-Nootdorp	50.3	52.7	2.4
Zeewolde	50.7	52.8	2.1
Tubbergen	50.6	52.7	2.1
Harderwijk	50.9	53.0	2.1
Nijkerk	51.1	53.2	2.1
Houten	52.9	54.9	2.0
Barneveld	52.3	54.1	1.8
Zwolle	52.1	53.8	1.7
Best	50.6	52.3	1.7
Midden-Delfland	52.3	53.9	1.6
Woudenberg	52.9	54.3	1.4
Heumen	51.3	52.1	0.8
Urk	52.0	52.3	0.3
Average	51.4	53.2	1.8

4.8 Elected old industrial municipalities

Elected old industrial municipalities scored on average 2.0 percentage points higher over the reporting period, as shown in Table 4.8. Oisterwijk improved the most with 3.4 percentage points, followed by Valkenswaard.

Table 4.8 Improvements and reductions in total sustainability scores of elected old industrial municipalities over 2020-2023

Old industrial municipality	Sustainability score 2020	Sustainability score 2023	Difference
Oisterwijk	49.9	53.3	3.4
Valkenswaard	48.5	51.7	3.2
Oldenzaal	51.7	54.8	3.1

Culemborg	50.0	52.9	2.9
Hellendoorn	51.2	53.9	2.7
Losser	51.9	53.7	1.8
Waalre	51.7	53.4	1.7
Bergeijk	51.9	53.6	1.7
Best	50.6	52.3	1.7
Rijssen-Holten	53.0	54.6	1.6
Bladel	52.2	53.6	1.4
Wierden	52.8	54.2	1.4
Haaksbergen	52.8	54.1	1.3
Landsmeer	46.8	47.7	0.9
Putten	50.8	51.4	0.6
Average	51.1	53.0	2.0

4.9 Elected residential municipalities

Residential municipalities improved in sustainability score by 1.4 percentage points on average, as can be seen in Table 4.9. Bloemendaal increased the most with 2.9 percentage points since last year, followed by Voorschoten and Pijnacker-Nootdorp.

Table 4.9 Improvements and reductions in total sustainability scores of elected old industrial municipalities over 2020-2023

Residential municipality	Sustainability score 2020	Sustainability score 2023	Difference
Bloemendaal	52.3	55.2	2.9
Voorschoten	51.0	53.5	2.5
Pijnacker-Nootdorp	50.3	52.7	2.4
Borne	49.0	50.9	1.9
Castricum	51.6	53.4	1.8
Waalre	51.7	53.4	1.7
Wijk bij Duurstede	52.3	53.9	1.6
Eijsden-Margraten	49.2	50.8	1.6
Mook en Middelaar	52.7	54.0	1.3
Meerssen	49.1	50.2	1.1
Hendrik-Ido-Ambacht	50.5	51.6	1.1
Reusel-De Mierden	52.7	53.5	0.8
Voerendaal	48.3	48.7	0.4
Waterland	49.6	49.8	0.2
Heemskerk	49.0	49.1	0.1
Average	50.6	52.0	1.4

4.10 Elected shrink municipalities

As far as elected shrink municipalities are concerned, it is found that they improved 1.6 percentage points on average last year (see Table 4.10). Noardeast-Frysland improved most with 2.5 percentage points, followed by Leudal and Ooststellingwerf.

Table 4.10 Improvements and reductions in total sustainability scores of elected shrink municipalities over 2020-2023

Shrink municipality	Sustainability score 2020	Sustainability score 2023	Difference
Noardeast-Frysland	47.5	50.0	2.5
Leudal	48.1	50.4	2.3
Ooststellingwerf	46.9	49.2	2.3
Echt-Susteren	46.0	47.9	1.9
Valkenburg aan de Geul	48.7	50.5	1.8
Gulpen-Wittem	46.9	48.7	1.8
Roerdalen	46.1	47.8	1.7
Berkelland	51.6	53.2	1.6
Bronckhorst	54.0	55.5	1.5
Doesburg	48.6	50.0	1.4
Mook en Middelaar	52.7	54.0	1.3
Bergen (NH.)	49.7	51.0	1.3
Meerssen	49.1	50.2	1.1
Bergen (L.)	48.6	49.2	0.6
Average	48.9	50.5	1.6

4.11 Elected small municipalities

The group of small municipalities has improved its score in 2023 by 2.0 percentage points, as shown in Table 4.11. Leusden leads this group by improving with 4.4 percentage points, followed by Oestgeest, Bloemendaal and Tynaarlo.

Table 4.11 Improvements and reductions in total sustainability scores of elected old industrial municipalities over 2020-2023

Small municipality	Sustainability score 2020	Sustainability score 2023	Difference
Leusden	52.6	57.0	4.4
Oegstgeest	51.3	54.7	3.4
Bloemendaal	52.3	55.2	2.9
Tynaarlo	52.2	55.0	2.8
Lisse	50.2	52.8	2.6
Hof van Twente	51.8	53.7	1.9
Castricum	51.6	53.4	1.8
Bunnik	52.5	54.3	1.8
Heeze-Leende	52.5	54.3	1.8
Midden-Delfland	52.3	53.9	1.6

Dinkelland	54.0	55.5	1.5
Mook en Middelaar	52.7	54.0	1.3
Noordenveld	52.3	53.4	1.1
Wageningen	55.2	55.8	0.6
Putten	50.8	51.4	0.6
Average	52.3	54.3	2.0

4.12 Elected tourist municipalities

The sustainability score of the elected tourist type of municipalities has improved on average 1.4 percentage points (see Table 4.12). Noordwijk improved the most with 3.2 percentage points, followed by Bloemendaal, Utrecht and Groningen. Schiermonnikoog decreased slightly with 0.5 percentage points.

Table 4.12 Improvements and reductions in total sustainability scores of elected tourist municipalities over 2020-2023

Tourist municipality	Sustainability score 2020	Sustainability score 2023	Difference
Noordwijk	53.1	56.3	3.2
Bloemendaal	52.3	55.2	2.9
Utrecht	52.4	54.5	2.1
Groningen	50.0	51.9	1.9
Bergeijk	51.9	53.6	1.7
Veere	51.1	52.8	1.7
Mook en Middelaar	52.7	54.0	1.3
Bergen (NH.)	49.7	51.0	1.3
Hilvarenbeek	52.9	53.9	1.0
Terschelling	52.2	53.2	1.0
Vlieland	54.7	55.5	0.8
Ameland	52.1	52.9	0.8
Steenwijkerland	52.3	53.0	0.7
Westerveld	50.6	51.1	0.5
Schiermonnikoog	51.5	51.0	-0.5
Average	52.0	53.3	1.4

4.13 Elected work municipalities

Elected work municipalities on average performed well the past year (plus 1.9 percentage point), as illustrated in table 4.13. Noordwijk improved the most with 3.2 percentage points, followed by Oldenzaal, Ermelo and Deventer.

Table 4.13 Improvements and reductions in total sustainability scores of elected work municipalities over 2020-2023

Work municipality	Sustainability score 2020	Sustainability score 2023	Difference
Noordwijk	53.1	56.3	3.2
Oldenzaal	51.7	54.8	3.1
Ermelo	51.0	53.5	2.5
Deventer	50.4	52.6	2.2
Apeldoorn	52.2	54.4	2.2
Nunspeet	51.0	53.1	2.1
Utrecht	52.4	54.5	2.1
Nijmegen	52.9	54.6	1.7
Rijssen-Holten	53.0	54.6	1.6
Bladel	52.2	53.6	1.4
Oost Gelre	52.7	53.9	1.2
Ede	52.9	54.1	1.2
Delft	51.2	52.1	0.9
Wageningen	55.2	55.8	0.6
Average	52.3	54.1	1.9

4.14 Elected 100,000plus municipalities

The, for Dutch dimensions, relative large elected 100,000plus cities, on average improved their score with 1.8 percentage points. Amersfoort and Leiden improved the most, each with 3.2 percentage points. Almere is the only municipality in this group with a decreased score (-0.2 percentage points).

Table 4.14 Improvements and reductions in total sustainability scores of elected 100,000plus over 2020-2023

100,000plus municipality	Sustainability score 2020	Sustainability score 2023	Difference
Amersfoort	50.1	53.3	3.2
Leiden	48.6	51.8	3.2
Deventer	50.4	52.6	2.2
Apeldoorn	52.2	54.4	2.2
Utrecht	52.4	54.5	2.1
Enschede	49.7	51.8	2.1
Groningen	50.0	51.9	1.9
Eindhoven	50.7	52.6	1.9
Nijmegen	52.9	54.6	1.7
Zwolle	52.1	53.8	1.7
Arnhem	50.1	51.5	1.4
Ede	52.9	54.1	1.2
Delft	51.2	52.1	0.9

Haarlem	49.7	50.6	0.9
Almere	49.6	49.4	-0.2
Average	50.8	52.6	1.8

4.15 Summary of score changes of Elected Municipalities and their typology

Table 4.15 gives an overview of the average performance of the 14 groups of municipalities. The largest improvements in percentage points were found in former industrial municipalities and small municipalities. Highest sustainability scores were measured in growth municipalities (54.4 percentage points) and lowest in shrink municipalities (50.5 percentage points).

Table 4.15 Changes in total sustainability scores of 14 types of elected municipalities over 2020-2023

Type of municipality	Sustainability score 2020	Sustainability score 2023	Difference
Small municipalities	52.3	54.3	2.0
Mid-sized municipalities	50.4	52.3	1.9
100.000plus municipality	50.8	52.6	1.8
Agricultural municipality	52.4	54.2	1.8
Center municipality	51.0	52.7	1.7
Former industrial municipality	51.1	53.0	2.0
Green municipality	52.2	54.1	1.8
Growth municipalities	52.5	54.4	1.9
Historic municipalities	51.4	53.1	1.7
New Town municipality	51.4	53.2	1.8
Residential municipalities	50.6	52.0	1.4
Shrink municipality	48.9	50.5	1.6
Touristic municipalities	52.0	53.3	1.4
Work municipality	52.3	54.1	1.9

5 Overall outcome for elected municipalities including their CO2-emission scores in 2020-2023

This chapter presents a final overview of the performance of the elected municipalities, independent from their typology.

The initiative has been with the World Bank that started the green bond instrument in order to help promote the transition to a low carbon economy, and to slow down climate change. Considering this background, this chapter includes a description of the performance of the elected municipalities in relation to CO2-emissions. Although they are included as indicator in the ecological capital, this aspect will be highlighted as an element of special interest, being often the key factor for green bond and sustainability bond investors.

5.1 General outcome of improving and regressing elected municipalities

Among elected municipalities 98% had similar or higher sustainability scores in 2023 compared to 2020 (see also Annex 1).

Tables 5.1 and 5.2 show the elected municipalities that showed the largest improvement or decrease in their sustainability score over time. The best performing municipality in this respect among elected municipalities is Leusden followed by Rheden, Oegstgeest and Oisterwijk.

Table 5.1 Ten elected municipalities improving sustainability score most in the period 2020-2023

Elected municipality	Typology	Total score 2020	Total score 2023	Difference
Leusden	Large, Growth, Historic, Work, Centre, Tourist	52.6	57	4.4
Rheden	Large, Growth, Historic, Centre, Tourist	49.6	53.7	4.1
Oegstgeest	Small	51.3	54.7	3.4
Oisterwijk	Small, Growth, Work	49.9	53.3	3.4
Valkenswaard	Small, Shrink, Green, Tourist	48.5	51.7	3.2
Amersfoort	Small, Growth, Tourist, Former industrial	50.1	53.3	3.2
Leiden	Medium, Growth, Work	48.6	51.8	3.2
Noordwijk	Small, Residential, Green, Centre	53.1	56.3	3.2
Oldenzaal	Small, Work, Former industrial	51.7	54.8	3.1
Woerden	Medium, Growth, Historic, Work, Green, Centre	49.7	52.8	3.1

The largest reduction in sustainability score among elected municipalities was found in Schiermonnikoog, followed by Almere.

Table 5.2 Ten Elected Municipalities with largest declining sustainability score in the period 2020-2023

Municipality	Typology	Total score 2020	Total score 2023	Difference
Schiermonnikoog	Small, Growth, Historic, Green, Tourist	51.5	51	-0.5
Almere	Small, Historic, Green, Tourist	49.6	49.4	-0.2
Heemskerk	Small, Green, Tourist	49	49.1	0.1
Waterland	Small, Shrink	49.6	49.8	0.2
Urk	Small, Residential, Green	52	52.3	0.3
Voerendaal	Small, Work, Agricultural	48.3	48.7	0.4
Westerveld	Small, Shrink, Residential, Green, Tourist	50.6	51.1	0.5
Wageningen	Small, Agricultural	55.2	55.8	0.6
Bergen (L.)	Small, Former industrial	48.6	49.2	0.6
Blaricum	Small, Shrink, Historic, Agricultural	52.4	53	0.6

5.2 CO2-emission score performance of elected municipalities

In this paragraph, the outcome of the CO2-emission assessment of elected municipalities will be discussed. This is one of the key transitions to which national governments have committed themselves in the framework of the UN Climate Change Convention, and particularly the commitment has been underlined since the 2015 Paris Agreement. Also individual municipalities have similar commitments, e.g. in the framework of the Covenant of Mayors to combat climate change. In the Netherlands the Association of Dutch Municipalities (VNG) has signed an agreement in 2013 with the national government and other parties to substantially reduce CO2-emissions in the coming years. New agreements are underway.

Data on CO2 emissions are available for each municipality via the web-portal of the Dutch Emissions Authority . They calculate the CO2 emissions every five years, including the most recent two years. At this moment, data are available for 1990-2015 in a five-year interval, supplemented with the two most recent years in their database (2019 and 2020). In this impact report, the reduction over the two most recent years has been used.

A closer look at the CO2 reductions shows that the group of elected municipalities realized a reduction in CO2 emissions over the last year; in which CO2 emissions decreased by 6.5%. The other municipalities realized CO2 emissions reduction of 6.2%. The outcome of this analysis is shown in table 5.3.

Table 5.3 CO2 reductions in different time periods of the elected municipalities and the total group of municipalities

Considered group of municipalities	1990-2019	2010-2020	2019-2020
Elected (111)	-38.0%	-33.0%	-6.5%
Others	4.3%	-14.4%	-6.1%
Total (342)	-5.3%	-17.8%	-6.2%

The highest reduction was found in Leiden, followed by Haarlem and Lisse. Table 5.4 shows that Ameland, Schiermonnikoog and Hilvarenbeek noted the largest increase in CO2 emissions. CO2 emission changes for all municipalities over the last year are given in Annex B.

Table 5.4 Ten elected municipalities with most and least reduction in CO2-emissions over the last year (equals measuring years 2018-2019)

Elected municipality	Emission change over measuring years 2019-2020		Elected municipality	Emission change over measuring years 2019-2020
Leiden	-18.0		Ameland	18.9
Haarlem	-17.2		Schiermonnikoog	18.8
Lisse	-16.8		Hilvarenbeek	10.0
Wageningen	-15.7		Ooststellingwerf	8.6
Bergen (NH.)	-15.4		Reusel-De Mierden	3.0
Landsmeer	-15.2		Oost Gelre	2.6
Amstelveen	-14.7		Mook en Middelaar	2.6
Heemskerk	-14.4		Tynaarlo	2.0
Rijssen-Holten	-14.3		Haaksbergen	1.9
Hilversum	-14.3		Noardeast-Fryslân	1.7

6 SDG scores

In the earlier 2018 framework report, a method was introduced to measure the achievement of the 2015 UN Sustainable Development Goals (SDGs). Showing the impacts of societal activities in terms of their contribution to the SDGs, has become very important for many organizations and particularly for banks and pension funds. These have been active since 2015 to develop a so-called 'taxonomy on Sustainable Development Investments (SDIs)' that translates the SDGs into investable opportunities from the perspective of Asset Owners[5].

An elaborated description of the methodology used to calculate the SDG scores can be found in the Method report 2023[6]. In essence it is based on aggregating elements of the sustainability scores in a way consistent with the definitions of the SDGs.

6.1 Progress of the elected municipalities towards the SDGs

Comparison over the years 2020 and 2023 for the elected group, as shown in table 6.1, makes clear that the performance of several SDGs improved slightly or substantially (SDG 1, 3, 4, 5, 7, 8, 9, 10, 12, 13, 14 and 16) but other showed a small decrease or stayed the same. (SDG 2, 11 and 15).

In general, table 6.1 shows that the elected municipalities improved their performance between 2020 and 2023 for 11 of the 15 goals measured.

Table 6.1 SDG scores for elected (n=111) and all (n=342) municipalities 2020-2023

	All municipalities (n=342)					Elected municipalities (n=111)				
SDG	**2020**	**2021**	**2022**	**2023**	**Difference 2020-2023**	**2020**	**2021**	**2022**	**2023**	**Difference 2020-2023**
1. No Poverty	42.3	45.0	48.7	51.8	9.5	45.9	48.7	52.2	55.2	9.3
2. Zero Hunger	44.5	44.4	44.4	44.3	-0.2	44.8	44.8	44.8	44.6	-0.2
3. Good Health and Well-being	45.9	47.1	47.0	46.7	0.8	48.8	49.9	49.8	49.4	0.6
4. Quality Education	50.6	52.9	51.9	51.1	0.6	52.9	55.1	54.2	53.6	0.7
5. Gender Equality	56.9	57.7	59.1	59.8	2.9	57.3	58.2	59.4	60.4	3.0

[5] https://finance.ec.europa.eu/sustainable-finance/tools-and-standards/eu-taxonomy-sustainable-activities_en

[6] www.hetpon-telos.nl/methodreport2023

6. Clean Water and Sanitation										
7. Affordable and Clean Energy	45.5	47.8	49.6	48.1	2.6	46.1	48.4	50.1	48.6	2.5
8. Decent Work and Economic Growth	51.3	52.0	51.2	52.0	0.7	52.7	53.5	52.3	53.1	0.5
9. Industry, Innovation and Infrastructure	41.9	44.5	44.9	45.8	3.9	43.9	46.4	46.6	47.4	3.6
10. Reduced Inequalities	51.9	52.0	52.0	52.9	1.1	52.0	52.1	52.0	53.0	1.0
11. Sustainable Cities and Communities	50.7	49.4	49.1	47.5	-3.2	53.2	51.7	51.4	49.7	-3.5
12. Responsible Consumption and Production	59.8	60.6	60.0	61.1	1.3	61.9	62.6	61.8	63.0	1.1
13. Climate Action	46.8	48.0	48.2	47.6	0.9	48.8	50.1	50.2	49.7	0.9
14. Life below Water	37.2	38.7	41.5	39.0	1.8	37.9	39.5	42.8	40.8	2.8
15. Life on Land	45.5	45.5	45.5	45.5	0.0	50.7	50.7	50.7	50.7	0.0
16. Peace, Justice and Strong Institutions	48.6	48.4	50.2	51.2	2.6	51.0	51.6	53.4	54.3	3.3
17. Partnerships for the Goals										

As shown in table 6.1, 2 of the 17 SDGs could not be measured because of lack of data, or because they are not relevant for municipalities. These are SDG 6 (Clean water and sanitation) and SDG 17 (Partnerships for the Goals).

6.2 Differences between the elected and the total group of municipalities on the SDGs

The total group of municipalities outperforms the total group on 8 of the 15 measured goals, but the differences become smaller. On 4 of the 15 goals the elected group showed a higher increase or smaller decline over the reported period than the total group. There are not many differences in the development of the scores between the two groups. They almost always had the same amount of percentage points decrease or increase.

There are not many significant differences in the development of the scores between the two groups as for most goals both groups have a very similar percentage points decrease or increase.
More information about the method of analysis on the SDGs can be found in the 2023 Method report for municipalities[7].

[7] www.hetpon-telos.nl/methodreport2023

7 Discussion and overview of outcome of assessment period 2020-2023

The elected municipalities continued to outperform the total group of municipalities with 2.3 percentage points (52.7 vs. 50.4), as listed in table 1. Both groups of municipalities show an improvement of the overall score with 1.8 percentage points. Largest improvements occurred this year for the economic capital (2.1 to 2.3 percentage points for both groups), while those for the socio-cultural capital and ecological capital were smaller (1.4 to 1.7 and 1.5 to 1.6 percentage points).

A closer look at the CO2 reductions shows that the group of elected municipalities realized a reduction in CO2 emissions over the last year by 6.5%. The other municipalities realized CO2 emission reductions of 6.1%. The outcome of this analysis is shown in table 5.3.

Scores of municipalities are rather dynamic from year to year, although some major differences and (dis)advantages among municipalities are of a structural nature. In the reporting period elected municipalities Leusden, Rheden, Oegstgeest and Oisterwijk were able to improve their total sustainability score most. The largest reduction in sustainability score among elected municipalities was detected in Schiermonnikoog, followed by Almere.

Comparison over the years 2020 and 2023 for the elected group, as shown in table 6.1, makes clear that the performance of several SDGs improved slightly or substantially (SDG 1, 3, 4, 5, 7, 8, 9, 10, 12, 13, 14 and 16) but other showed a small decrease or stayed the same. (SDG 2, 11 and 15). The elected group of municipalities outperforms the total group on 8 of the 15 measured goals, but the differences become smaller. On 4 of the 15 goals the elected group showed a higher increase or smaller decline over the reported period than the total group. There are not many significant differences in the development of the scores between the two groups as for most goals both groups have a very similar percentage points decrease or increase.

It is not always the (absolutely) best scoring municipality in a certain class that shows the largest improvement of its score year-on-year. The advantage of a high score on sustainability may turn into a (temporary) disadvantage, or a result that is harder to improve upon. Yet, the differences in position on a scoring list and the magnitude of improvement or decrease from year to year provide relevant incentives for municipalities to better understand their position, learn from each other, reduce vulnerabilities and develop new approaches to existing and new challenges. Impact reporting of Sustainability Bonds stimulates elected and other municipalities to invest proceeds from the bonds and other resources in most effective operational and innovative activities structurally to improve sustainability.

Annex A: Overview of the differences in total sustainability scores in 2020 and 2023 for all 111 elected municipalities

Municipality	Total sustainability score 2020	Total sustainability score 2023	Difference 2020-2023
Leusden	52.6	57	4.4
Rheden	49.6	53.7	4.1
Oegstgeest	51.3	54.7	3.4
Oisterwijk	49.9	53.3	3.4
Valkenswaard	48.5	51.7	3.2
Amersfoort	50.1	53.3	3.2
Leiden	48.6	51.8	3.2
Noordwijk	53.1	56.3	3.2
Oldenzaal	51.7	54.8	3.1
Woerden	49.7	52.8	3.1
Bloemendaal	52.3	55.2	2.9
Heerenveen	50.6	53.5	2.9
Culemborg	50	52.9	2.9
Katwijk	50.9	53.7	2.8
Tynaarlo	52.2	55	2.8
Westerkwartier	49.9	52.6	2.7
Hellendoorn	51.2	53.9	2.7
Zutphen	51.7	54.4	2.7
Lisse	50.2	52.8	2.6
Raalte	51.9	54.4	2.5
Voorschoten	51	53.5	2.5
Ermelo	51	53.5	2.5
Noardeast-Fryslân	47.5	50	2.5
Pijnacker-Nootdorp	50.3	52.7	2.4
Ooststellingwerf	46.9	49.2	2.3
Leudal	48.1	50.4	2.3
Elburg	51.7	54	2.3
Gouda	48.9	51.1	2.2
Deventer	50.4	52.6	2.2
Hilversum	49.2	51.4	2.2
Apeldoorn	52.2	54.4	2.2
Tubbergen	50.6	52.7	2.1
Utrecht (gemeente)	52.4	54.5	2.1
Dalfsen	53.3	55.4	2.1
Harderwijk	50.9	53	2.1
Nijkerk	51.1	53.2	2.1
Nunspeet	51	53.1	2.1

Zeewolde	50.7	52.8	2.1
Enschede	49.7	51.8	2.1
Ommen	52.7	54.8	2.1
Houten	52.9	54.9	2
Hof van Twente	51.8	53.7	1.9
Eindhoven	50.7	52.6	1.9
Borne	49	50.9	1.9
Groningen (gemeente)	50	51.9	1.9
Echt-Susteren	46	47.9	1.9
Losser	51.9	53.7	1.8
Barneveld	52.3	54.1	1.8
Gulpen-Wittem	46.9	48.7	1.8
Zwartewaterland	51.4	53.2	1.8
Castricum	51.6	53.4	1.8
Heeze-Leende	52.5	54.3	1.8
Bunnik	52.5	54.3	1.8
Valkenburg aan de Geul	48.7	50.5	1.8
Bergeijk	51.9	53.6	1.7
Nijmegen	52.9	54.6	1.7
Zwolle	52.1	53.8	1.7
Best	50.6	52.3	1.7
Molenlanden	51.1	52.8	1.7
Waalre	51.7	53.4	1.7
Roerdalen	46.1	47.8	1.7
Veere	51.1	52.8	1.7
Rijssen-Holten	53	54.6	1.6
Wijk bij Duurstede	52.3	53.9	1.6
Midden-Delfland	52.3	53.9	1.6
Berkelland	51.6	53.2	1.6
Hengelo (O.)	49.1	50.7	1.6
Staphorst	53.7	55.3	1.6
Eijsden-Margraten	49.2	50.8	1.6
Dinkelland	54	55.5	1.5
Bronckhorst	54	55.5	1.5
Wierden	52.8	54.2	1.4
Krimpenerwaard	50.3	51.7	1.4
Woudenberg	52.9	54.3	1.4
Bladel	52.2	53.6	1.4
Arnhem	50.1	51.5	1.4
Doesburg	48.6	50	1.4
Haaksbergen	52.8	54.1	1.3
Bergen (NH.)	49.7	51	1.3
Mook en Middelaar	52.7	54	1.3

Ede	52.9	54.1	1.2
Oost Gelre	52.7	53.9	1.2
Kampen	52	53.1	1.1
Meerssen	49.1	50.2	1.1
Hendrik-Ido-Ambacht	50.5	51.6	1.1
Huizen	50.8	51.9	1.1
Noordenveld	52.3	53.4	1.1
Hilvarenbeek	52.9	53.9	1
Terschelling	52.2	53.2	1
Amstelveen	51.1	52.1	1
Altena	49.4	50.4	1
Landsmeer	46.8	47.7	0.9
Haarlem	49.7	50.6	0.9
Delft	51.2	52.1	0.9
Heumen	51.3	52.1	0.8
Reusel-De Mierden	52.7	53.5	0.8
Ameland	52.1	52.9	0.8
Vlieland	54.7	55.5	0.8
Steenwijkerland	52.3	53	0.7
Putten	50.8	51.4	0.6
Gooise Meren	49.6	50.2	0.6
Blaricum	52.4	53	0.6
Bergen (L.)	48.6	49.2	0.6
Wageningen	55.2	55.8	0.6
Westerveld	50.6	51.1	0.5
Voerendaal	48.3	48.7	0.4
Urk	52	52.3	0.3
Waterland	49.6	49.8	0.2
Heemskerk	49	49.1	0.1
Almere	49.6	49.4	-0.2
Schiermonnikoog	51.5	51	-0.5

Annex B: Overview of the changes in CO2-emissions in 2019-2020 for all elected municipalities

Elected municipality	Typology	% Difference 2019-2020
Leiden	Large. Growth. Historic. Work. Centre. Tourist	-18.0
Haarlem	Large. Growth. Historic. Centre. Tourist	-17.2
Lisse	Small	-16.8
Wageningen	Small. Growth. Work	-15.7
Bergen (NH.)	Small. Shrink. Green. Tourist	-15.4
Landsmeer	Small. Growth. Tourist. Former industrial	-15.2
Amstelveen	Medium. Growth. Work	-14.7
Heemskerk	Small. Residential. Green. Centre	-14.4
Rijssen-Holten	Small. Work. Former industrial	-14.3
Hilversum	Medium. Growth. Historic. Work. Green. Centre	-14.3
Nijmegen	Large. Growth. Work. Centre	-13.2
Woerden	Medium. Growth. Work. Agricultural	-12.2
Deventer	Large. Work. Centre	-12.1
Bergeijk	Small. Tourist. Former industrial	-11.5
Putten	Small. Green. Former industrial	-11.4
Voorschoten	Small. Growth. Residential	-11.2
Gouda	Medium. Centre	-11.1
Groningen (gemeente)	Large. Growth. Work. Centre. Tourist	-10.9
Valkenswaard	Small. Green. Former industrial	-10.8
Amersfoort	Large. Growth. New town. Work	-10.5
Katwijk	Medium. Growth. Centre	-10.1
Echt-Susteren	Small. Shrink. Former industrial	-10.1
Valkenburg aan de Geul	Small. Shrink. Tourist	-9.9
Woudenberg	Small. Growth. New town	-9.7
Harderwijk	Small. Growth. New town. Work. Green	-9.6
Huizen	Small. Centre	-9.5
Noordwijk	Small. Growth. Work. Green. Tourist	-9.4
Oldenzaal	Small. Work. Former industrial	-9.1
Wijk bij Duurstede	Small. Residential. Agricultural	-8.8
Zwolle	Large. Growth. New town. Work. Centre	-8.8
Ommen	Small. Green	-8.5
Eindhoven	Large. Growth. Work. Centre. Former industrial	-8.4
Arnhem	Large. Growth. Historic. Work. Green. Centre. Tourist	-8.3
Castricum	Small. Residential. Centre	-8.3
Leusden	Small. Growth. Green	-7.9
Ede	Large. Growth. Work. Green. Centre	-7.6

Heerenveen	Medium. Work. Agricultural	-7.4
Zutphen	Small. Historic	-7.4
Apeldoorn	Large. Growth. Work. Green. Centre	-7.3
Barneveld	Medium. Growth. New town. Work. Green	-7.3
Almere	Large. Growth. New town. Centre	-7.2
Zwartewaterland	Small. Agricultural	-7.1
Delft	Large. Growth. Historic. Work. Centre	-7.0
Doesburg	Small. Shrink. Historic. Former industrial	-6.9
Culemborg	Small. Growth. New town. Former industrial	-6.9
Nunspeet	Small. Work. Green	-6.6
Enschede	Large. Work. Centre. Former industrial	-6.2
Voerendaal	Small. Residential. Agricultural. Tourist. Former industrial	-6.1
Waterland	Small. Historic. Residential. Tourist	-5.9
Meerssen	Small. Shrink. Residential. Tourist. Former industrial	-5.9
Hellendoorn	Small. Green. Former industrial	-5.9
Dinkelland	Small. Agricultural	-5.7
Ermelo	Small. Work. Green	-5.6
Eijsden-Margraten	Small. Historic. Residential. Agricultural. Tourist	-5.0
Rheden	Small. Historic. Green	-5.0
Roerdalen	Small. Shrink. Residential. Green. Tourist	-4.9
Molenlanden	Small. Historic. Agricultural	-4.9
Heeze-Leende	Small. Growth. Green	-4.7
Leudal	Small. Shrink. Centre	-4.5
Terschelling	Small. Green. Tourist	-4.4
Waalre	Small. Growth. Residential. Green. Former industrial	-4.4
Westerkwartier	Medium. Agricultural	-4.4
Gulpen-Wittem	Small. Shrink. Historic. Agricultural. Tourist	-4.3
Elburg	Small. Green	-4.3
Tubbergen	Small. New town. Agricultural	-4.1
Best	Small. New town. Former industrial	-4.1
Bladel	Small. Growth. Work. Green. Former industrial	-4.1
Kampen	Medium. Growth. Historic. Agricultural	-3.9
Oisterwijk	Small. Former industrial	-3.8
Urk	Small. Growth. New town	-3.8
Oegstgeest	Small. Growth	-3.7
Losser	Small. Former industrial	-3.7
Hengelo (O.)	Medium. Work. Former industrial	-3.7
Bunnik	Small. Growth. Agricultural	-3.6
Hendrik-Ido-Ambacht	Small. Growth. New town. Residential	-3.5
Altena	Medium	-3.5
Utrecht (gemeente)	Large. Growth. Historic. Work. Centre. Tourist	-3.2

Bloemendaal	Small. Growth. Residential. Green. Tourist	-2.9
Wierden	Small. Agricultural. Former industrial	-2.5
Vlieland	Small. Historic. Green. Tourist	-2.4
Nijkerk	Small. Growth. New town. Work	-1.6
Veere	Small. Tourist	-1.5
Heumen	Small. New town	-1.4
Staphorst	Small. Growth. Historic. Agricultural	-1.4
Hof van Twente	Small. Agricultural	-1.4
Borne	Small. Growth. Residential. Former industrial	-1.3
Dalfsen	Small. Agricultural	-1.3
Steenwijkerland	Small. Tourist	-1.2
Westerveld	Small. Green. Tourist	-1.2
Bergen (L.)	Small. Shrink. Green. Tourist	-1.2
Pijnacker-Nootdorp	Medium. Growth. New town. Residential	-1.2
Gooise Meren	Medium. Centre	-1.1
Midden-Delfland	Small. Growth. New town. Agricultural	-1.0
Houten	Medium. Growth. New town	-1.0
Bronckhorst	Small. Shrink. Historic. Agricultural	-0.6
Berkelland	Small. Shrink. Agricultural	-0.5
Raalte	Small. Agricultural	0.0
Krimpenerwaard	Medium. Agricultural	0.2
Zeewolde	Small. Growth. New town	0.2
Blaricum	Small. Growth	0.5
Noordenveld	Small	1.6
Noardeast-Fryslân	Small. Shrink. Historic. Agricultural	1.7
Haaksbergen	Small. Former industrial	1.9
Tynaarlo	Small. Agricultural	2.0
Mook en Middelaar	Small. Shrink. Residential. Green. Tourist	2.6
Oost Gelre	Small. Work. Agricultural	2.6
Reusel-De Mierden	Small. Residential. Green	3.0
Ooststellingwerf	Small. Shrink	8.6
Hilvarenbeek	Small. Green. Tourist	10.0
Schiermonnikoog	Small. Historic. Green. Tourist	18.8
Ameland	Small. Growth. Historic. Green. Tourist	18.9

(Source: www.emissieregistratie.nl)

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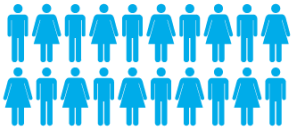
OPGERICHT IN
1947

GEVESTIGD IN
TILBURG

KENNISONDERNEMING
STICHTING ZONDER WINSTOOGMERK

AANTAL MEDEWERKERS

35



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- DATA EN METHODEN

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- PROVINCIES
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About Het PON & Telos

Improving social decision-making

Het PON & Telos is a social knowledge organisation at the heart of society. We consider it our mission to improve social decision-making. We do this by linking scientific knowledge to practical knowledge. In this process every voice counts! We collect, investigate, analyse, and interpret opinions and facts using stimulating approaches and innovative methods. In doing so, we are always focused on sustainable development: the harmonious connection between social, environmental and economic objectives. In this way we contribute to the quality of society at large, now and in the future.

With a multidisciplinary and creative team of nearly 30 research consultants, we work mainly for local and regional authorities in the Netherlands, but also for corporate bodies, banks, care and welfare institutions, funds, and social organisations. We work closely with civic organisations and other knowledge institutions and are an official partner of Tilburg University. We use our knowledge and insights to advise initiators, policy-makers and managers. This enables them to make informed choices and give a positive impulse to the society of tomorrow.

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