

First Performance Report of Elected Dutch Municipalities of BNG Bank Sustainability Bond of 2018



telos brabant centre for
sustainable development

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Tilburg, 15 October 2019
Documentnummer **19.217**

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Sustainability Bond of 2018**



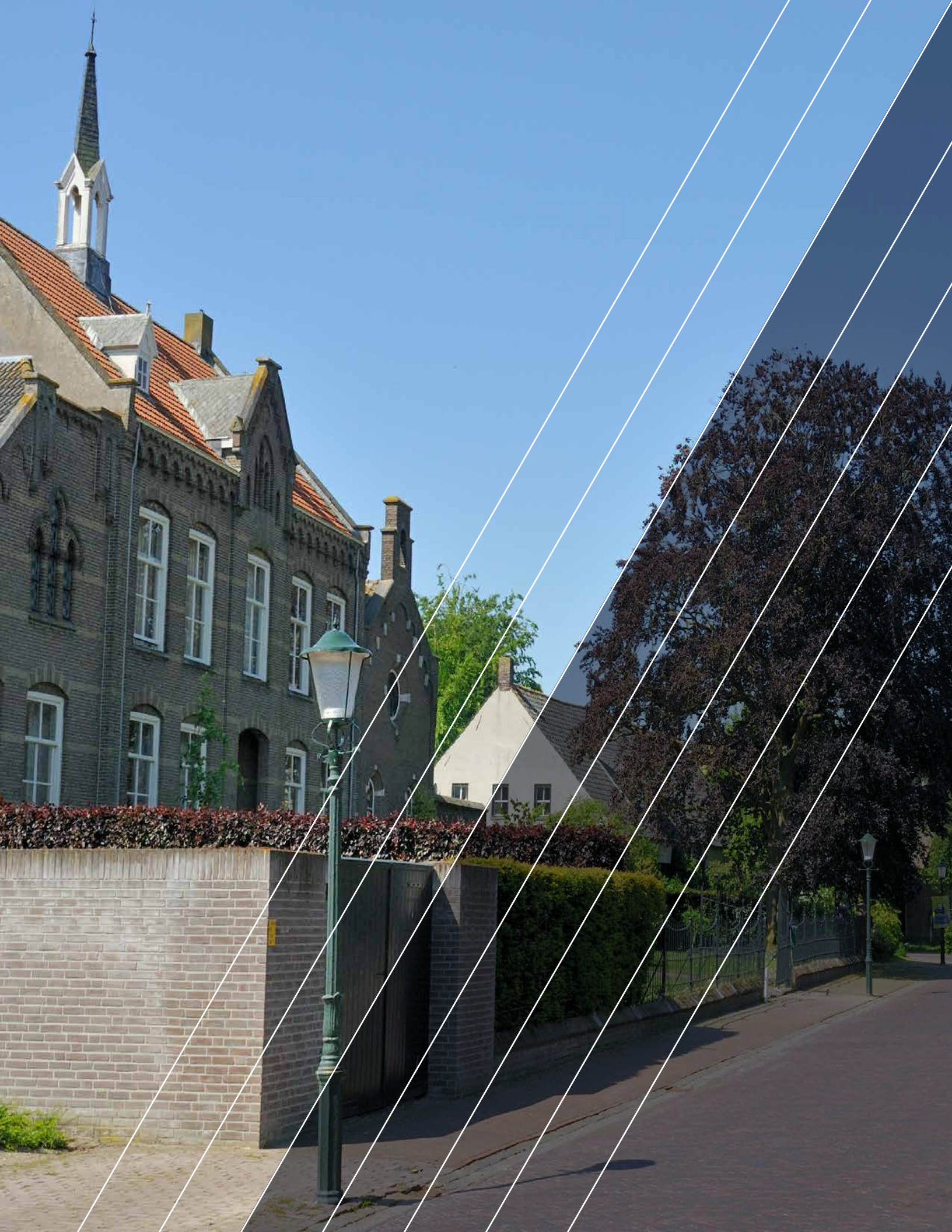
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Summary

November 26, 2018, BNG Bank launched its fifth Sustainability Bond, a new EUR 750 million 7-year benchmark. The Framework document for the BNG Bank Sustainability Bond 2018 was provided to BNG Bank by Telos of Tilburg University on 4 October 2018, describing the selection process of best-in-class Dutch municipalities eligible for the bond. The same selection of sustainable best-in-class municipalities was used to issue a later sustainability bond in 2019. This resulted in an AUD 400 million sustainability bond which is also due November 2025.

An important quality indicator of the bond is the 'Use of proceeds reporting (UPR)'. BNG Bank intends to include in the UPR yearly impact reports, during the period 2019–2025, based on updated data for the sustainability scores of all Dutch municipalities. The update will give insight in the changes in sustainability scores of the group of 117 Elected Municipalities compared to the total group of 355 municipalities of the Netherlands. BNG Bank asked Telos to provide the yearly impact reports for this bond, based on its yearly National Monitor Sustainable Municipalities. This performance report is the first impact report of the mentioned recent Sustainability Bonds, covering the years 2018-2019.

The Elected Municipalities continued to outperform the total group of municipalities with 2.3 percentage points (52.81 vs 50.45), as listed in table S.1. Both groups of municipalities show similar improvements of the overall score with 0.62-0.64 percentage points. Largest improvements occurred this year for the economic capital (1.2 percentage points), while those for the ecological and socio-cultural capital were relatively small (0.24-0.28 and 0.36-0.49 percentage points).

Table S.1 Sustainability scores in percentage points of goal achievement of 117 Elected Municipalities and of the total group of 355 Dutch municipalities in 2019 compared to 2018

SUSTAINABILITY CAPITAL	ELECTED 2018	TOTAL 2018	ELECTED 2019	TOTAL 2019	ELECTED: DIFFERENCE 2018-2019	TOTAL: DIFFERENCE 2018-2019
Total	52.19	49.81	52.81	50.45	0.62	0.64
Socio-cultural	54.35	51.56	54.71	52.06	0.36	0.49
Ecological	52.37	50.30	52.65	50.55	0.28	0.24
Economic	49.84	47.56	51.06	48.76	1.22	1.20

The analysis shows that 80% of Elected Municipalities realized past year a stable or improved total sustainability score and 75% of Elected Municipalities reduced or stabilized their CO₂-emissions. A closer look at the CO₂ reductions shows that the group of Elected Municipalities realized a reduction in CO₂ emissions over de last year of 2.35%. This is a positive

result, given the fact that the national CO2 emissions decreased only 1.44% in the past year.

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 Elected Municipalities Rozendaal, Dalfsen, Oldenzaal and Eemnes were able to improve their total sustainability score most (1.9 percentage points or more), while the largest reduction in sustainability score among Elected Municipalities was detected in Grave, Elburg, Koggeland and Renswoude.

Insight is provided on the performance in relation to the UN Sustainable development goals (SDGs). The performance of the total group of municipalities for several SDGs improved substantially (Goals 4, 6, 7, 8, 12 and 16), but for other SDGs a small fallback was noted (Goals 1, 3, 11 and 15). The performance of the group of Elected Municipalities deviates for some SDGs from the total group of municipalities. Elected Municipalities still outperform the total group in 13 out of the 14 SDGs, but differences are becoming smaller. Only for goal 13 (Climate action) the total group performs better than the elected group, as was the case in 2018. The total group shows a higher improvement on SDG 4 (quality education) and SDG 8 (decent work and economic growth) than the group of Elected Municipalities. It should be noted that SDGs are more based on a political than scientific selection of indicators to measure them.

It should in general be realized that one year of observation is actually too short to arrive at conclusions on significant trends.



1 Introduction

At the request of BNG Bank, Telos of Tilburg University, has provided on 4 October 2018 a Framework document to BNG Bank¹ that describes the sustainability criteria and selection process of best-in-class Dutch municipalities eligible for a BNG Bank Sustainability Bond 2018. Telos developed this framework based on its National Monitor of Sustainable Municipalities 2018, from which the fifth edition was presented October 2018. The National Monitor of Sustainable Municipalities was produced for the first time in 2014 on behalf of the Dutch Ministry for Infrastructure and Environment.

November 26, 2018, BNG Bank launched its fifth Sustainability Bond, a new EUR 750 million, 7-year benchmark². Additionally, a second AUD 400 million, 7-year bond was issued based on the same selection of sustainable municipalities spring 2019. Both bonds are due November 26, 2025.

An important quality indicator of these bonds is the 'Use of proceeds reporting (UPR)'. BNG Bank intends to include in the UPR yearly impact reports, during the period 2019 – 2025, based on updated data for the sustainability scores of all the 355 Dutch municipalities. The update will give insight in the changes in sustainability scores of the group of 117 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, because such data are not yet sufficiently available.

BNG Bank has asked Telos to provide the yearly updating of the database over the years 2019-2025 and report on the annual changes in scores of the Elected Municipalities. This is the first of such reports on the 2018 bonds, covering the period 2018-2019. It describes how the performance is assessed, the general outcome of the comparison over the years 2018-2019, including the impact on CO₂-emissions. Additionally, this reports gives for the first time insights in the development of the Elected Municipalities on the UN Sustainable Development Goals (SDGs).

1 <https://www.bngbank.com/Documents/Investors/Sustainability%20Framework%202018.pdf>

2 <https://www.bngbank.com/funding/sustainability-bond>



2 Description of activities

2.1 Update of database

The impact report for 2019 on the municipalities elected for the BNG Bank Sustainability Bond of 2018 requires an update of the database used in the National Monitor Sustainable Municipalities 2018. This monitor is basically designed on the basis of the UN and EU concepts 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 designed independently from the later agreed UN Sustainable Development Goals (SDGs) or Global Goals in 2015. A detailed analysis of the comparability and differences by Telos, as described in the National Monitor of 2017³, has shown that these goals have a wide similarity.

The United Nations SDGs include a set of 17 Global Goals that cover urgent tasks to be addressed by national governments, local authorities and private actors. These tasks are more categorized from a policy than from a scientific point of view. A detailed analysis of the differences and overlaps between the triple P approach, used in this framework, and the 17 Goals of the SDGs shows that a large part of the indicators are the same but for some goals clear differences occur. Goal 14 on seas and oceans is for example not included because this is at present less 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. The relevant triple P 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.

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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>

- 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.

The National Monitor Sustainable Municipalities 2018 discerned 14 city types. These 14 types have been used for the Framework of the BNG Bank Sustainability Bond of 2018 and are the basis for the performance report at hand.

2.2 **Assesment of performance of Elected Sustainable Municipalities**

Based on the updated database, sustainability performance of Elected Municipalities in 2018 will be evaluated and discussed. The group of Elected Municipalities, described in the Framework of the BNG Bank Sustainability Bond of October 2018, has been selected by identifying the 15 best scoring municipalities for each of 14 types of cities, such as 'agricultural', 'former industrial', 'shrinking', etc. municipalities. The 125 Elected Municipalities have been selected out of the total number of 380 municipalities in the Netherlands in 2018. Since 2018, the number of municipalities is decreasing due to rearrangements among the municipalities. In 2019 there are only 355 municipalities. This influenced the selection of 125 municipalities for the bond of 2018 as well. The municipalities of Nuth, Schinnen, Haren, Winsum, Molenwaard, Ferwerderadiel, Geldermalsen, and Zuidhorn 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 117 municipalities.

Furthermore, the number of indicators was partially expanded due to new possibilities but also reduced due to lack of continued data collection, resulting in 132 indicators now, compared to 126 in 2018. Such changes had to be included in the comparison between 2019 and 2018. Where needed new data for 2018 were separately collected and calculated. The reader is referred to the Framework report for the 2018 BNG Bank Sustainability bond⁴, for the details of the amendments made in the calculation of the sustainability scores and how comparability between the years 2018 and 2019 was ascertained.

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<https://www.bngbank.com/Documents/Investors/Sustainability%20Framework%202018.pdf>

This assessment includes:

- 1 A comparison of sustainability scores of Elected Municipalities with the total group of Dutch municipalities for 2018 and 2019.
- 2 A comparison of sustainability scores for Elected Municipalities between 2018 and 2019, 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 2018 and 2019.

In the next chapters, the outcome of these activities is presented. Finally, the overall changes observed for reporting period 2018-2019 will be discussed.



3 Outcome of updating exercise and comparison of 2018 and 2019

3.1 National Monitor Sustainable Municipalities 2019

In October 2019, Telos completed its National Monitor Sustainable Municipalities 2019. The major outcome is shown in table 3.1.

Table 3.1 Sustainability performance of the total group of Dutch municipalities in 2018-2019

SUSTAINABILITY CAPITAL	2018	2019
Total	49.81	50.45
Socio-cultural	51.56	52.06
Ecological	50.30	50.55
Economic	47.56	48.76

Last year the average overall sustainability score improved from 49.81 till 50.45 percentage points. This was due to improvements of all three capitals. The ecological capital improved only marginally the past year from 50.30 to 50.55. The socio-cultural capital also improved marginally from 51.56 to 52.06 percentage points. And economic capital increased most from 47.56 till 48.76.

3.2 General characteristics of Elected Municipalities for the BNG Bank Sustainability Bond 2018

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 in 2019

MUNICIPALITY SIZE (NUMBER OF INHABITANTS)	TOTAL NUMBER OF MUNICIPALITIES IN THE NETHERLANDS	TOTAL NUMBER OF MUNICIPALITIES IN ELECTED GROUP
Less than 50,000	270 (76.1%)	86 (73.50%)
50,000-100,000	54 (15.2%)	16 (13.68%)
More than 100,000	31 (8.7%)	15 (12.82%)

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 and 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 in their class as instrument 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.

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 2018 and 2019 for the total group of Dutch municipalities and the group of Elected Municipalities. It shows that general trends, an improvement of the overall score with 0.62-0.64 percentage points, are similar in both groups.

Table 3.3 Sustainability performance of Elected Municipalities and of the total group of Dutch municipalities in 2018 compared to 2019 (percentage points)

SUSTAINABILITY CAPITAL	ELECTED 2018	TOTAL 2018	ELECTED 2019	TOTAL 2019	ELECTED: DIFFERENCE 2018-2019	TOTAL: DIFFERENCE 2018-2019
Total	52.19	49.81	52.81	50.45	0.62	0.64
Socio-cultural	54.35	51.56	54.71	52.06	0.36	0.49
Ecological	52.37	50.30	52.65	50.55	0.28	0.24
Economic	49.84	47.56	51.06	48.76	1.22	1.20

The Elected Municipalities continued to outperform the total group of municipalities with 2.4 percentage points (52.81 vs 50.45), as listed in table 13.3. Largest improvements occurred this year for the economic capital (1.2 percentage points), while those for the ecological and socio-cultural capital were relatively small (0.284/-0.248 and 0.36/-0.49 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, see 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 2018 and 2019 for the group of Elected Municipalities and all Dutch municipalities

SUSTAINABILITY STOCK	DIFFERENCE 2018-2019 OF 117 ELECTED MUNICIPALITIES	DIFFERENCE 2018-2019 OF ALL 355 MUNICIPALITIES
Socio-cultural		
Arts & culture	-0.07	0.27
Economic participation	1.09	0.97
Education	0.67	1.14
Health	1.34	1.13
Political Participation	0.00	0.00
Residential environment	-1.61	-0.89
Safety	1.50	1.30
Social participation	-0.04	0.02
Ecological		
Air	-0.51	-0.31
Annoyance & emergencies	-0.56	-0.65
Energy	2.01	2.00
Nature & landscape	0.00	0.00
Soil	-1.22	-1.77
Resources & waste	1.45	1.46

Water	0.81	0.96
Economic		
Competitiveness	1.48	1.43
Infrastructure & mobility	1.13	0.95
Knowledge	0.89	0.82
Labor	1.82	2.02
Spatial location conditions	0.76	0.78

Socio-cultural stocks

Among socio-cultural stocks, differences between both groups of municipalities were small. Most striking is the improvement in 'safety' and 'economic participation' in the both groups of municipalities. The decline in both groups of 'residential environment' and 'health' is contrary to not what can be expected in a thriving society.

Ecological stocks

Also here, the group of Elected Municipalities shows a similar pattern as the total group of municipalities, with improvements over the period 2018-2019 for the stocks of 'energy' and 'resources and waste'. These are the two priorities of the national government: climate change and circular economy. The decline in 'soil' was visible in both groups.

Economic stocks

Elected Municipalities improved practically as much as the total group of municipalities. The biggest improvement is seen for 'labor', but all stocks shown an improvement.

It should be realized that one year of observation is actually too short to arrive at conclusions on significant trends.



4 Elected Municipalities showing largest improvement or reduction in sustainability score in 2018-2019 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 2018: agricultural-, center-, green-, growth-, historic-, former 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 2018 have in this assessment been corrected for additional indicators used in 2019 to make them comparable with the 2019 data. The results are therefore sometimes differing from those given in the 2018 Framework document.

4.1 Elected agricultural municipalities

Table 4.1 presents the 15 best-in-class municipalities of the agricultural type, their reconstructed 2018 scores and the 2019 scores for total sustainability. Two municipalities were performing less over the past year and thirteen better. Dalfsen was improving most in the period 2018-2019. Overall, the score of the group of elected agricultural municipalities improved 0.5 percentage points since 2018.

Table 4.1 Improvements and reductions in total sustainability scores of elected agricultural municipalities over 2018-2019

AGRICULTURAL MUNICIPALITY	SUSTAINABILITY SCORE 2018	SUSTAINABILITY SCORE 2019	DIFFERENCE
Dalfsen	53.5	55.6	2.1
Eemnes	52.0	53.9	1.9
Bunnik	53.5	54.7	1.2
Olst-Wijhe	50.6	51.6	1.0
Dinkelland	53.5	54.3	0.8
Staphorst	52.8	53.4	0.6
Eijsden-Margraten	52.6	53.0	0.4
Oost Gelre	53.4	53.8	0.3
Zoeterwoude	51.0	51.3	0.3

Raalte	53.3	53.5	0.2
Wierden	52.0	52.1	0.2
Voorst	53.8	53.8	0.1
Zwartewaterland	52.3	52.3	0.0
Montfoort	51.2	51.1	-0.1
Midden-Delfland	55.5	54.8	-0.7
Average	52.7	53.3	0.5



Figure 4.1 Ommen – Dalfsen (Photo: Eric de Redelijkheid)

4.2 Elected center municipalities

As table 4.2 shows, not all 15 elected municipalities improved their total sustainability score the last year. Castricum improved the most (1.8 percentage points) followed by Apeldoorn and Zwolle.

Table 4.2 2 Improvements in total sustainability scores of elected center municipalities over 2018-2019

CENTER MUNICIPALITY	SUSTAINABILITY SCORE 2018	SUSTAINABILITY SCORE 2019	DIFFERENCE
Castricum	52.5	54.3	1.8
Apeldoorn	51.0	52.5	1.5
Zwolle	53.1	54.5	1.4
Hilversum	52.3	53.6	1.3

Middelburg	50.1	51.2	1.1
Nijmegen	53.7	54.5	0.9
Deventer	53.5	54.2	0.7
Delft	53.8	54.5	0.7
Groningen	53.4	54.1	0.7
Amsterdam	52.8	53.3	0.6
Katwijk	51.6	51.9	0.4
Gooise Meren	52.4	52.7	0.3
Ede	52.6	52.7	0.1
Utrecht	53.9	53.9	0.0
Westland	49.7	49.5	-0.3
Leiden	54.0	53.6	-0.4
Average	52.5	53.2	0.7

4.3 Elected green municipalities

Elected green municipalities improved on average 0.7 percentage points last year. Two municipalities were falling back somewhat, while 13 improved their score as shown in table 4.3. Rozendaal improved the most with 3.3 percentage points.

Table 4.3 Improvements and reductions in total sustainability scores of elected green municipalities over 2018-2019

GREEN MUNICIPALITY	SUSTAINABILITY SCORE 2018	SUSTAINABILITY SCORE 2019	DIFFERENCE
Rozendaal	51.9	55.2	3.3
Waalre	53.1	54.6	1.4
Mook en Middelaar	54.2	55.5	1.3
Leusden	54.3	55.5	1.2
Utrechtse Heuvelrug	52.2	53.2	1.0
Heeze-Leende	53.7	54.7	1.0
Bloemendaal	54.7	55.6	0.9
Ermelo	53.3	54.2	0.8
Baarn	52.4	52.9	0.5
Nunspeet	53.8	54.2	0.4
Putten	53.1	53.4	0.3
Ede	52.6	52.7	0.1
Wassenaar	52.6	52.7	0.1
Barneveld	52.0	51.5	-0.5
Elburg	54.4	53.5	-0.9
Average	53.2	54.0	0.7



Figure 4.2 Markt in Waalre (Photo: Debot)

4.4 Elected growth municipalities

The elected growth municipalities showed an improvement of 0.6 percentage points last year. All municipalities except three, Ameland, Midden-Ddelfland and Oestgeest, improved their score. Highest improvement was found at Dalfsen.

Table 4.4 Improvements and reductions in total sustainability scores of elected growth municipalities over 2018-2019

GROWTH MUNICIPALITY	SUSTAINABILITY SCORE 2018	SUSTAINABILITY SCORE 2019	DIFFERENCE
Dalfsen	53.5	55.6	2.1
Wageningen	54.9	56.7	1.8
Bunnik	53.5	54.7	1.2
Heeze-Leende	53.7	54.7	1.0
Bloemendaal	54.7	55.6	0.9
Woudenberg	51.6	52.4	0.8
Houten	55.2	55.9	0.7
Staphorst	52.8	53.4	0.6
Scherpenzeel	48.5	48.9	0.5
Bladel	52.2	52.6	0.4
Voorschoten	54.6	54.7	0.1
Ameland	55.7	55.5	-0.2

Oegstgeest	55.0	54.4	-0.6
Midden-Delfland	55.5	54.8	-0.7
Average	53.7	54.3	0.6

4.5 Elected historic municipalities

Kampen and Lopik improved their score last year most, with equal or more than 1.0 percentage points among the elected historic municipalities. The average score improved last year with 0.4 percentage points, as presented in table 4.5.

Table 4.5 Improvements and reductions in total sustainability scores of elected historic municipalities over 2018-2019

HISTORIC MUNICIPALITY	SUSTAINABILITY SCORE 2018	SUSTAINABILITY SCORE 2019	DIFFERENCE
Kampen	52.9	54.0	1.2
Lopik	51.0	52.0	1.0
Bronckhorst	51.9	52.7	0.9
Delft	53.8	54.5	0.7
Waterland	53.6	54.4	0.7
Oudewater	50.1	50.8	0.7
Staphorst	52.8	53.4	0.6
Eijsden-Margraten	52.6	53.0	0.4
Schiermonnikoog	55.2	55.3	0.0
Utrecht	53.9	53.9	0.0
Ameland	55.7	55.5	-0.2
Leiden	54.0	53.6	-0.4
Vlieland	55.3	54.6	-0.7
Average	53.3	53.7	0.4

4.6 Elected mid-sized municipalities

Table 4.6 shows that mid-sized municipalities improved sustainability score on average with 0.6 percentage points last year. Woerden improved its score most.

Table 4.6 Improvements and reductions in total sustainability scores of elected mid-sized municipalities over 2018-2019

MID-SIZED MUNICIPALITY	SUSTAINABILITY SCORE 2018	SUSTAINABILITY SCORE 2019	DIFFERENCE
Woerden	51.9	53.2	1.3
Hilversum	52.3	53.6	1.3
Kampen	52.9	54.0	1.2
Doetinchem	50.5	51.7	1.1
Meerijstad	50.2	51.0	0.8
Deventer	53.5	54.2	0.7
Hardenberg	49.7	50.3	0.6
Amstelveen	51.9	52.4	0.5
Zeist	50.4	50.8	0.5
Veenendaal	49.7	50.1	0.4
Katwijk	51.6	51.9	0.4
Pijnacker-Nootdorp	50.7	51.1	0.3
Gooise Meren	52.4	52.7	0.3
Heerenveen	51.8	52.1	0.2
Krimpenerwaard	51.5	51.6	0.1
Barneveld	52.0	51.5	-0.5
Average	51.4	52.0	0.6

4.7 Elected New Town municipalities

Elected New Town municipalities improved on average their score with 0.4 percentage points (see table 4.7). Eemnes is on top of the list of improvement, followed by as well as Culemborg.

Table 4.7 Improvements and reductions in total sustainability scores of elected New Town municipalities over 2018-2019

NEW TOWN MUNICIPALITY	SUSTAINABILITY SCORE 2018	SUSTAINABILITY SCORE 2019	DIFFERENCE
Eemnes	52.0	53.9	1.9
Culemborg	52.1	53.9	1.8
Zeewolde	51.2	52.1	0.9
Tubbergen	52.3	53.1	0.8
Duiven	50.7	51.4	0.7
Best	51.0	51.7	0.7
Houten	55.2	55.9	0.7
Langedijk	51.3	51.7	0.3
Urk	54.8	55.1	0.2
Hendrik-Ido-Ambacht	51.5	51.7	0.2
Heumen	55.1	54.9	-0.2
Barneveld	52.0	51.5	-0.5

Midden-Delfland	55.5	54.8	-0.7
Renswoude	49.4	48.8	-0.7
Koggenland	50.5	49.7	-0.8
Average	52.3	52.7	0.4



Figure 4.3 Heusden (Photo: Jeroen Komen)

4.8 Elected former industrial municipalities

Elected former industrial municipalities scored on average 0.7 percentage points higher over the reporting period, as shown in table 4.8. Rijssen-Holt en and Hattem improved the most with 1.5 percentage points.

Table 4.8 Improvements and reductions in total sustainability scores of elected former industrial municipalities over 2018-2019

FORMER INDUSTRIAL MUNICIPALITY	SUSTAINABILITY SCORE 2018	SUSTAINABILITY SCORE 2019	DIFFERENCE
Rijssen-Holt en	51.8	53.4	1.5
Hattem	51.3	52.8	1.5
Waalre	53.1	54.6	1.4
Oisterwijk	50.8	52.2	1.4
Heusden	49.3	50.7	1.4
Losser	52.2	53.3	1.2
Bergeijk	53.3	54.1	0.8

Best	51.0	51.7	0.7
Landsmeer	51.0	51.5	0.5
Bladel	52.2	52.6	0.4
Putten	53.1	53.4	0.3
Hellendoorn	53.6	53.7	0.2
Nuenen, Gerwen en Nederwetten	52.3	52.4	0.2
Wierden	52.0	52.1	0.2
Brummen	52.0	52.1	0.1
Oostzaan	52.5	52.5	0.0
Average	52.0	52.7	0.7

4.9 Elected residential municipalities

Residential municipalities are a well performing elected group of municipalities when comparing the scores in 2018 with those of 2019, resulting in an average increased score of 0.8 percentage points (table 4.9). Rozendaal improved the most with 3.3 percentage points followed by Castricum, Waalre and Heusden).

Table 4.9 Improvements and reductions in total sustainability scores of elected residential municipalities over 2018-2019

RESIDENTIAL MUNICIPALITY	SUSTAINABILITY SCORE 2018	SUSTAINABILITY SCORE 2019	DIFFERENCE
Rozendaal	51.9	55.2	3.3
Castricum	52.5	54.3	1.8
Waalre	53.1	54.6	1.4
Heusden	49.3	50.7	1.4
Mook en Middelaar	54.2	55.5	1.3
Bloemendaal	54.7	55.6	0.9
Waterland	53.6	54.4	0.7
Buren	50.8	51.4	0.6
Eijsden-Margraten	52.6	53.0	0.4
Heiloo	52.9	53.3	0.3
Wijk bij Duurstede	54.3	54.5	0.2
Voorschoten	54.6	54.7	0.1
Heumen	55.1	54.9	-0.2
Grave	52.3	51.4	-1.0
Average	53.0	53.8	0.8

4.10 Elected shrink municipalities

As far as elected shrink municipalities are concerned, it is found that they improved 0.6 percentage points on average last year (see table 4.10).

Table 4.10 Improvements and reductions in total sustainability scores of elected shrink municipalities over 2018-2019

SHRINK MUNICIPALITY	SUSTAINABILITY SCORE 2018	SUSTAINABILITY SCORE 2019	DIFFERENCE
Voerendaal	48.8	50.3	1.6
Mook en Middelaar	54.2	55.5	1.3
Gulpen-Wittern	49.1	50.3	1.2
Aalten	51.7	52.6	1.0
Bronckhorst	51.9	52.7	0.9
Valkenburg aan de Geul	51.4	52.2	0.8
Meerssen	50.3	51.0	0.7
Berkelland	52.6	53.0	0.4
Bergen (NH.)	53.2	53.1	-0.1
Leudal	50.1	49.7	-0.4
Grave	52.3	51.4	-1.0
Average	51.4	52.0	0.6

4.11 Elected small municipalities

The group of small municipalities has improved its score in 2019 by 0.6 percentage points. In absolute terms the sustainability score remained in 2019 the highest of all types of cities elected (54.9%), as shown in table 4.11. Rozendaal leads this group by improving 3.3 percentage points, while five municipalities lost some of their earlier score.

Table 4.11 Improvements and reductions in total sustainability scores of elected small municipalities over 2018-2019

SMALL MUNICIPALITY	SUSTAINABILITY SCORE 2018	SUSTAINABILITY SCORE 2019	DIFFERENCE
Rozendaal	51.9	55.2	3.3
Dalfsen	53.5	55.6	2.1
Mook en Middelaar	54.2	55.5	1.3
Bunnik	53.5	54.7	1.2
Heeze-Leende	53.7	54.7	1.0
Bloemendaal	54.7	55.6	0.9
Houten	55.2	55.9	0.7
Bladel	52.2	52.6	0.4
Wijk bij Duurstede	54.3	54.5	0.2
Voorschoten	54.6	54.7	0.1

Heumen	55.1	54.9	-0.2
Ameland	55.7	55.5	-0.2
Oegstgeest	55.0	54.4	-0.6
Vlieland	55.3	54.6	-0.7
Midden-Delfland	55.5	54.8	-0.7
Average	54.3	54.9	0.6



Figure 4.4 Heeze-Leende (Photo: Peter van der Wielen)

4.12 Elected tourist municipalities

The sustainability score of the elected tourist type of municipalities has improved on average 0.3 percentage points. (see table 4.12).

Table 4.12 Improvements and reductions in total sustainability scores of elected tourist municipalities over 2018-2019

TOURIST MUNICIPALITY	SUSTAINABILITY SCORE 2018	SUSTAINABILITY SCORE 2019	DIFFERENCE
Mook en Middelaar	54.2	55.5	1.3
Bergeijk	53.3	54.1	0.8
Waterland	53.6	54.4	0.7
Groningen	53.4	54.1	0.7
Noordwijk	52.0	52.6	0.6
Landsmeer	51.0	51.5	0.5

Hilvarenbeek	52.3	52.7	0.5
Eijsden-Margraten	52.6	53.0	0.4
Veere	52.3	52.5	0.2
Wassenaar	52.6	52.7	0.1
Schiermonnikoog	55.2	55.3	0.0
Oostzaan	52.5	52.5	0.0
Terschelling	53.1	53.1	0.0
Ameland	55.7	55.5	-0.2
Vlieland	55.3	54.6	-0.7
Average	53.3	53.6	0.3

4.13 Elected work municipalities

Elected work municipalities performed the past year on average well (plus 0.7 percentage points), as illustrated in table 4.13. Oldenzaal was improving its score most (2.0 percentage points).

Table 4.13 Improvements and reductions in total sustainability scores of elected work municipalities over 2018-2019

WORK MUNICIPALITY	SUSTAINABILITY SCORE 2018	SUSTAINABILITY SCORE 2019	DIFFERENCE
Oldenzaal	52.3	54.3	2.0
Ouder-Amstel	51.5	53.1	1.6
Apeldoorn	51.0	52.5	1.5
Zwolle	53.1	54.5	1.4
Veldhoven	50.6	51.6	1.0
Duiven	50.7	51.4	0.7
Groningen	53.4	54.1	0.7
Best	51.0	51.7	0.7
Amsterdam	52.8	53.3	0.6
Noordwijk	52.0	52.6	0.6
Amstelveen	51.9	52.4	0.5
Son en Breugel	50.0	50.5	0.5
Utrecht	53.9	53.9	0.0
Westland	49.7	49.5	-0.3
Leiden	54.0	53.6	-0.4
Barneveld	52.0	51.5	-0.5
Average	51.9	52.5	0.7

4.14 Elected 100,000plus municipalities

The, for Dutch circumstances dimensions, relative large, elected 100,000plus cities show on average a high improvement (0.7 percentage points) in score from 2018 to 2019. Apeldoorn improved most followed by Zwolle and Arnhem.

Table 4.14 Improvements and reductions in total sustainability scores of elected 100,000plus over 2018-2019

100,000PLUS MUNICIPALITY	SUSTAINABILITY SCORE 2018	SUSTAINABILITY SCORE 2019	DIFFERENCE
Apeldoorn	51.0	52.5	1.5
Zwolle	53.1	54.5	1.4
Arnhem	50.8	52.0	1.2
Amersfoort	51.1	52.1	1.0
's-Hertogenbosch	49.8	50.8	1.0
Breda	49.0	50.0	1.0
Eindhoven	50.2	51.1	0.9
Nijmegen	53.7	54.5	0.9
Delft	53.8	54.5	0.7
Groningen	53.4	54.1	0.7
Amsterdam	52.8	53.3	0.6
Ede	52.6	52.7	0.1
Utrecht	53.9	53.9	0.0
Westland	49.7	49.5	-0.3
Leiden	54.0	53.6	-0.4
Average	51.9	52.6	0.7



Figure 4.5 Amersfoort (Photo: Bert Kaufmann)

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. Highest improvements in percentage points were found in residential municipalities. Highest sustainability scores were measured in small municipalities (54.9 percentage points) and lowest in mid-sized and shrink municipalities (52.0 % percentage points).

Table 4.15 Changes in total sustainability scores of 14 types of elected municipalities over 2018-2019

TYPE OF MUNICIPALITY	SUSTAINABILITY SCORE 2018	SUSTAINABILITY SCORE 2019	DIFFERENCE
Small municipality	54.3	54.9	0.6
Mid-sized municipality	51.4	52.0	0.6
100,000plus municipality	51.9	52.6	0.7
Agricultural municipality	52.7	53.3	0.5
Center municipality	52.5	53.2	0.7
Former industrial municipality	52.0	52.7	0.7
Green municipality	53.2	54.0	0.7
Growth municipalities	53.7	54.3	0.6
Historic municipalities	53.3	53.7	0.4
New Town municipality	52.3	52.7	0.4

Residential municipalities	53.0	53.8	0.8
Shrink municipality	51.4	52.0	0.6
Touristic municipalities	53.3	53.6	0.3
Work municipality	51.9	52.5	0.7



5 Overall outcome for Elected Municipalities including their CO2-emission scores in 2018-2019

This chapter presents an overview of the performance of the Elected Municipalities, independent from their typology.

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 80% had similar or higher sustainability scores in 2019 compared to 2018 (see also Annex A).

Tables 5.1 and 5.2 show Elected Municipalities which were changing their sustainability score most or least favorably. The best performing municipality in this respect among Elected Municipalities is Rozendaal followed by Dalfsen and Oldenzaal.

Table 5.1 Ten Elected Municipalities improving sustainability score most in the period 2018-2019

ELECTED MUNICIPALITY	TYPOLGY	TOTAL SCORE 2018	TOTAL SCORE 2019	DIFFERENCE
Rozendaal	Small, Green, Residential	51.9	55.2	3.3
Dalfsen	Small, Agricultural, Growth	53.5	55.6	2.1
Oldenzaal	Small, Former industrial, Work	52.3	54.3	2.0
Eemnes	Small, Agricultural, New town	52.0	53.9	1.9
Castricum	Small, Centre, Residential	52.5	54.3	1.8
Wageningen	Small, Growth	54.9	56.7	1.8
Culemborg	Small, Former industrial, New town	52.1	53.9	1.8
Ouder-Amstel	Small, Work	51.5	53.1	1.6
Voerendaal	Small, Agricultural, Former industrial, Residential, Shrink, Tourist	48.8	50.3	1.6
Rijssen-Holtten	Small, Former industrial	51.8	53.4	1.5

The largest reduction in sustainability score among Elected Municipalities was detected in Grave followed by Elburg and Koggenland.

Table 5.2 Ten Elected Municipalities with largest declining sustainability score in the period 2018-2019

ELECTED MUNICIPALITY	TYOLOGY	TOTAL SCORE 2018	TOTAL SCORE 2019	DIFFERENCE
Grave	Small, Residential, Shrink	52.3	51.4	-1.0
Elburg	Small, Green	54.4	53.5	-0.9
Koggenland	Small, Agricultural, Growth, New town	50.5	49.7	-0.8
Renswoude	Small, Agricultural, Growth, New town	49.4	48.8	-0.7
Midden-Delfland	Small, Agricultural, Growth, New town	55.5	54.8	-0.7
Vlieland	Small, Historic, Tourist	55.3	54.6	-0.7
Oegstgeest	Small, Growth	55.0	54.4	-0.6
Barneveld	Medium, Green, Growth, New town, Work	52.0	51.5	-0.5
Leiden	Large, Centre, Growth, Historic, Tourist, Work	54.0	53.6	-0.4
Leudal	Small, Centre, Shrink	50.1	49.7	-0.4

5.2 CO₂-emission performance of Elected Municipalities

Finally, 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 since the 2015 Paris Agreement. But 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 the coming years. New agreements have been made in 2019 based on a national commitment to cut GHG emissions by 49% before 2050.

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 (2016 and 2017). In this impact report, the reduction over the two most recent years has been used. This impact report shows the direct emission data instead of calculated sustainability scores for CO₂ emissions, to give a more detailed picture.

A closer look at the CO₂ reductions shows that the group of Elected Municipalities realized a reduction in CO₂ emissions over de last year

of 2.35%. This is a positive result, given the fact that the national CO2 emissions decreased only 1.44% in the past year. 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	1990-2017	2010-2017	2016-2017
Elected (117)	-15.86%	-18.91%	-2.35%
Others	16.51%	-3.17%	-1.21%
Total (355)	8.41%	-6.69%	-1.44%

The highest reduction was found in the city of Amsterdam.

Table 5.4 shows that Ameland, Vlieland and Terschelling noted the largest increase in CO2 emissions. However, the latter are amongst the municipalities with the lowest emissions in the Netherlands. 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 2016-2017)

ELECTED MUNICIPALITY	EMISSION CHANGE OVER MEASURING YEARS 2016-2017	ELECTED MUNICIPALITY	EMISSION CHANGE OVER MEASURING YEARS 2016-2017
Amsterdam	-9%	Ameland	36%
Scherpenzeel	-7%	Vlieland	19%
Brummen	-7%	Terschelling	16%
Nuenen, Gerwen en Nederwetten	-5%	Berkelland	12%
Son en Breugel	-5%	Schiermonnikoog	11%
Castricum	-5%	Westland	9%
Leiden	-4%	Pijnacker-Nootdorp	6%
Amersfoort	-4%	Midden-Delfland	6%
Nunspeet	-4%	Oldenzaal	4%
Putten	-4%	Urk	4%



6 SDGs scores

In the 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, is recently becoming a must 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 Owners¹

An elaborated description of the methodology used to calculate the SDG scores can be found in the framework report 2019². 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 2018 and 2019, as shown in table 6.1, makes clear that the performance of several SDGs improved substantially (Goals 4, 6, 7, 8, 12 and 16) , but other showed a small fallback (Goals 1, 3, 11, and 15).

In general, table 6.1 shows that the municipalities improved their performance between 2018 and 2019 for 8 of the 14 goals measured.

1 https://ec.europa.eu/info/business-economy-euro/banking-and-finance/sustainable-finance_en

2 Zoeteman, B.C.J., Mulder, R., Dagevos, J. (2019). Sustainability Framework for Best-In-Class Municipality Investment; NV Bank Nederlandse Gemeente (BNG Bank) Sustainability Bond 2019, Telos report nr 19.214, August 2019, Tilburg University

Table 6.1 SDG scores for elected (n=117) and all (n=355) municipalities 2018-2019

SDG	ALL MUNICIPALITIES (N=355)			ELECTED MUNICIPALITIES (N=117)		
	2018	2019	DIFFERENCE 2018-2019	2018	2019	DIFFERENCE 2018-2019
1. No Poverty	63.1	62.6	-0.5	67.5	67.2	-0.3
2. Zero Hunger	39.0	39.0	0.0	42.2	42.2	0.0
3. Good Health and Well-being	53.5	52.6	-0.9	56.2	55.2	-1.1
4. Quality Education	55.8	57.6	1.8	58.9	60.1	1.2
5. Gender Equality						
6. Clean Water and Sanitation	54.4	55.8	1.5	55.4	56.8	1.4
7. Affordable and Clean Energy	34.8	36.7	2.0	36.0	38.0	2.0
8. Decent Work and Economic Growth	48.8	50.4	1.6	51.8	53.0	1.2
9. Industry, Innovation and Infrastructure	38.3	39.0	0.7	41.1	42.0	0.9
10. Reduced Inequalities	52.6	53.0	0.5	55.3	55.8	0.5
11. Sustainable Cities and Communities	54.6	54.3	-0.3	55.5	55.0	-0.4
12. Responsible Consumption and Production	48.1	51.0	2.9	49.9	53.0	3.1
13. Climate Action	50.9	50.9	0.0	49.4	49.4	0.0
14. Life below Water						
15. Life on Land	48.2	46.4	-1.7	49.6	48.0	-1.6
16. Peace, Justice and Strong Institutions	54.8	56.4	1.6	58.0	59.7	1.6
17. Partnerships for the Goals						

As shown in table 6.1, 3 of the 17 SDGs could not be measured because of lack of data, or because they are not relevant for municipalities. These are nr. 5 (Gender equality), nr. 14 (Life below water) and nr.17 (Partnerships for the Goals).

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

The performance of the group of Elected Municipalities deviates for some goals slightly from the total group of municipalities. The Elected Municipalities still outperform the total group in 13 out of the 14 measured goals, but the differences are becoming smaller. Only for goal 13 (Climate action) the total group slightly performs better than the elected group, as was the case in 2018.

There are, however, some differences in the development of the scores between the two groups. In goal 1 (no poverty) the difference between the groups was already quite large in 2018 (4.4 percentage points), and grew even larger over the last year to 4.6 percentage points. This counts as well for goal 3 (good health and well-being). The total group shows a higher improvement on goals 4 (quality education) and 8 (decent work and economic growth) than the group of Elected Municipalities.

More information about the method of analyses on the SDGs can be found in the 2019 framework report for municipalities³. Here it is explained why for methodological reasons scores for the individual SDGs may not be added to calculate an overall average SDGs score.

3 Zoeteman, B.C.J., Mulder, R., Dagevos, J. (2019). Sustainability Framework for Best-in-Class Municipality Investment; NV Bank Nederlandse Gemeenten (BNG Bank) Sustainability Bond 2019, Telos report nr 19.214, August 2019, Tilburg University



7 Discussion and overview of outcome of assessment period 2018-2019

The end result shows that the 117 Elected Municipalities continued to outperform the total group of municipalities with 2.3 percentage points (52.55 vs 50.22), as listed in table 3.3. Both groups of municipalities show an improvement of the overall score with 0.53-0.57 percentage points. Largest improvements occurred this year for the economic capital (1.2 percentage points), while those for the ecological and socio-cultural capital were relatively small (0.24-0.28 and 0.08-0.26 percentage points).

The analysis shows that 80% of Elected Municipalities realized past year a stable or improved total sustainability score and 75% of Elected Municipalities reduced or stabilized their CO₂-emissions. A closer look at the CO₂ reductions shows that the group of Elected Municipalities realized a reduction in CO₂ emissions over de last year of 2.35%. This is a positive result, given the fact that the national CO₂ emissions decreased only 1.44% in the past year.

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 Elected Municipalities Rozendaal, Dalfsen, Oldenzaal and Eemnes were able to improve their total sustainability score most (1.9 percentage points or more), while the largest reduction in sustainability score among Elected Municipalities was detected in Grave, Elburg, Koggeland and Renswoude.

The performance of several SDGs improved substantially (Goals 4, 6, 7, 8, 12 and 16), but others showed a small fallback (Goals 1, 3, 11, and 15). The performance of the group of Elected Municipalities deviates for some goals from the total group of municipalities. The Elected Municipalities still outperform the total group in 13 out of the 14 measured SDGs, but the differences are becoming smaller. Only for goal 13 (Climate action) the total group performs better than the elected group, as was the case in 2018. The total group shows a higher improvement on SDG 4 (quality education) and SDG 8 (decent work and economic growth) than the Elected Municipalities.

It is not always the best scoring municipality in a certain class that shows the biggest improvement of its score in the next year. The advantage of a high score on sustainability may turn into a (temporary) disadvantage under certain circumstances. Yet, the differences in position on a scoring list and the magnitude of improvement or fallback 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 structural activities to improve sustainability.

ANNEXES

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A Overview of the differences in total sustainability scores in 2018 and 2019 for all 117 Elected Municipalities Municipalities

ELECTED MUNICIPALITY	TOTAL SUSTAINABILITY SCORE 2018	TOTAL SUSTAINABILITY SCORE 2019	DIFFERENCE 2018-2019
Rozendaal	51.9	55.2	3.3
Dalfsen	53.5	55.6	2.1
Oldenzaal	52.3	54.3	2.0
Eemnes	52.0	53.9	1.9
Castricum	52.5	54.3	1.8
Wageningen	54.9	56.7	1.8
Culemborg	52.1	53.9	1.8
Ouder-Amstel	51.5	53.1	1.6
Voerendaal	48.8	50.3	1.6
Rijssen-Holten	51.8	53.4	1.5
Apeldoorn	51.0	52.5	1.5
Hatterm	51.3	52.8	1.5
Waalre	53.1	54.6	1.4
Oisterwijk	50.8	52.2	1.4
Zwolle	53.1	54.5	1.4
Heusden	49.3	50.7	1.4
Mook en Middelaar	54.2	55.5	1.3
Woerden	51.9	53.2	1.3
Hilversum	52.3	53.6	1.3
Arnhem	50.8	52.0	1.2
Losser	52.2	53.3	1.2
Bunnik	53.5	54.7	1.2
Leusden	54.3	55.5	1.2
Kampen	52.9	54.0	1.2
Gulpen-Wittem	49.1	50.3	1.2
Middelburg	50.1	51.2	1.1
Doetinchem	50.5	51.7	1.1
Amersfoort	51.1	52.1	1.0
Olst-Wijhe	50.6	51.6	1.0
's-Hertogenbosch	49.8	50.8	1.0
Veldhoven	50.6	51.6	1.0
Lopik	51.0	52.0	1.0

ELECTED MUNICIPALITY	TOTAL SUSTAINABILITY SCORE 2018	TOTAL SUSTAINABILITY SCORE 2019	DIFFERENCE 2018-2019
Utrechtse Heuvelrug	52.2	53.2	1.0
Aalten	51.7	52.6	1.0
Breda	49.0	50.0	1.0
Heeze-Leende	53.7	54.7	1.0
Zeewolde	51.2	52.1	0.9
Eindhoven	50.2	51.1	0.9
Bloemendaal	54.7	55.6	0.9
Nijmegen	53.7	54.5	0.9
Bronckhorst	51.9	52.7	0.9
Woudenberg	51.6	52.4	0.8
Ermelo	53.3	54.2	0.8
Tubbergen	52.3	53.1	0.8
Valkenburg aan de Geul	51.4	52.2	0.8
Dinkelland	53.5	54.3	0.8
Bergeijk	53.3	54.1	0.8
Meerijstad	50.2	51.0	0.8
Deventer	53.5	54.2	0.7
Delft	53.8	54.5	0.7
Waterland	53.6	54.4	0.7
Duiven	50.7	51.4	0.7
Groningen	53.4	54.1	0.7
Best	51.0	51.7	0.7
Meerssen	50.3	51.0	0.7
Oudewater	50.1	50.8	0.7
Houten	55.2	55.9	0.7
Hardenberg	49.7	50.3	0.6
Amsterdam	52.8	53.3	0.6
Staphorst	52.8	53.4	0.6
Buren	50.8	51.4	0.6
Noordwijk	52.0	52.6	0.6
Landsmeer	51.0	51.5	0.5
Amstelveen	51.9	52.4	0.5
Baarn	52.4	52.9	0.5
Son en Breugel	50.0	50.5	0.5
Zeist	50.4	50.8	0.5
Scherpenzeel	48.5	48.9	0.5
Hilvarenbeek	52.3	52.7	0.5
Berkelland	52.6	53.0	0.4
Nunspeet	53.8	54.2	0.4
Eijsden-Margraten	52.6	53.0	0.4
Veenendaal	49.7	50.1	0.4
Katwijk	51.6	51.9	0.4
Bladel	52.2	52.6	0.4

ELECTED MUNICIPALITY	TOTAL SUSTAINABILITY SCORE 2018	TOTAL SUSTAINABILITY SCORE 2019	DIFFERENCE 2018-2019
Oost Gelre	53.4	53.8	0.3
Pijnacker-Nootdorp	50.7	51.1	0.3
Langedijk	51.3	51.7	0.3
Heiloo	52.9	53.3	0.3
Putten	53.1	53.4	0.3
Gooise Meren	52.4	52.7	0.3
Zoeterwoude	51.0	51.3	0.3
Wijk bij Duurstede	54.3	54.5	0.2
Heerenveen	51.8	52.1	0.2
Urk	54.8	55.1	0.2
Veere	52.3	52.5	0.2
Raalte	53.3	53.5	0.2
Hellendoorn	53.6	53.7	0.2
Nuenen, Gerwen en Nederwetten	52.3	52.4	0.2
Wierden	52.0	52.1	0.2
Hendrik-Ido-Ambacht	51.5	51.7	0.2
Brummen	52.0	52.1	0.1
Ede	52.6	52.7	0.1
Krimpenerwaard	51.5	51.6	0.1
Voorst	53.8	53.8	0.1
Voorschoten	54.6	54.7	0.1
Wassenaar	52.6	52.7	0.1
Schiermonnikoog	55.2	55.3	0.0
Utrecht	53.9	53.9	0.0
Oostzaan	52.5	52.5	0.0
Terschelling	53.1	53.1	0.0
Zwartewaterland	52.3	52.3	0.0
Bergen (NH.)	53.2	53.1	-0.1
Montfoort	51.2	51.1	-0.1
Heumen	55.1	54.9	-0.2
Ameland	55.7	55.5	-0.2
Westland	49.7	49.5	-0.3
Leudal	50.1	49.7	-0.4
Leiden	54.0	53.6	-0.4
Barneveld	52.0	51.5	-0.5
Oegstgeest	55.0	54.4	-0.6
Vlieland	55.3	54.6	-0.7
Midden-Delfland	55.5	54.8	-0.7
Renswoude	49.4	48.8	-0.7
Koggenland	50.5	49.7	-0.8
Elburg	54.4	53.5	-0.9
Grave	52.3	51.4	-1.0

B Overview of the changes in CO2-emissions in 2016-2017 for all Elected Municipalities

ELECTED MUNICIPALITY	TYPOLOGY	% DIFFERENCE 2016-2017
Amsterdam	Large, Centre, Growth, Historic, Tourist, Work	-9%
Scherpenzeel	Small, Growth	-7%
Brummen	Small, Former industrial	-7%
Nuenen, Gerwen en Nederwetten	Small, Former industrial	-5%
Son en Breugel	Small, Growth, Work	-5%
Castricum	Small, Centre, Residential	-5%
Leiden	Large, Centre, Growth, Historic, Tourist, Work	-4%
Amersfoort	Large, Growth, New town	-4%
Nunspeet	Small, Green	-4%
Putten	Small, Former industrial, Green	-4%
Zoeterwoude	Small, Agricultural	-3%
Hardenberg	Medium, Agricultural	-3%
Oostzaan	Small, Former industrial, Growth, Tourist	-3%
Rijssen-Holten	Small, Former industrial	-3%
's-Hertogenbosch	Large, Centre, Growth, Work	-3%
Hattem	Small, Former industrial	-3%
Oost Gelre	Small, Agricultural	-3%
Nijmegen	Large, Centre, Growth	-2%
Best	Small, Former industrial, New town, Work	-2%
Hilvarenbeek	Small, Tourist	-2%
Utrecht	Large, Centre, Growth, Historic, Work	-2%
Woudenberg	Small, Growth	-2%
Eijsden-Margraten	Small, Agricultural, Historic, Residential, Tourist	-2%
Leudal	Small, Centre, Shrink	-2%
Aalten	Small, Agricultural, Shrink	-2%
Montfoort	Small, Agricultural	-2%
Katwijk	Medium, Centre, Growth	-2%
Duiven	Small, New town, Work	-2%
Renswoude	Small, Agricultural, Growth, New town	-2%
Raalte	Small, Agricultural	-2%
Heeze-Leende	Small, Green, Growth	-1%
Oegstgeest	Small, Growth	-1%
Utrechtse Heuvelrug	Small, Green	-1%

Veenendaal	Medium, Former industrial, Growth	-1%
Voorschoten	Small, Growth, Residential	-1%
Heerenveen	Medium, Centre, Work	-1%
Olst-Wijhe	Small, Agricultural	-1%
Grave	Small, Residential, Shrink	-1%
Veere	Small, Tourist	-1%
Eemnes	Small, Agricultural, New town	-1%
Buren	Small, Agricultural, Residential	-1%
Wassenaar	Small, Green, Tourist	-1%
Bladel	Small, Former industrial, Growth	-1%
Rozendaal	Small, Green, Residential	-1%
Groningen	Large, Centre, Growth, Tourist, Work	-1%
Ermelo	Small, Green	-1%
Voerendaal	Small, Agricultural, Former industrial, Residential, Shrink, Tourist	-1%
Gooise Meren	Medium, Centre	-1%
Waalre	Small, Former industrial, Green, Residential	-1%
Bunnik	Small, Agricultural, Growth	-1%
Bergeijk	Small, Former industrial, Tourist	-1%
Zwolle	Large, Centre, Growth, Work	-1%
Meerijstad	Medium, Work	-1%
Oisterwijk	Small, Former industrial	-1%
Oudewater	Small, Agricultural, Historic	-1%
Meerssen	Small, Former industrial, Residential, Shrink, Tourist	-1%
Zeist	Medium, Green, Work	-1%
Barneveld	Medium, Green, Growth, New town, Work	0%
Voorst	Small, Agricultural	0%
Bronckhorst	Small, Agricultural, Historic, Shrink	0%
Bloemendaal	Small, Green, Growth, Residential	0%
Bergen (NH)	Small, Green, Shrink, Tourist	0%
Wierden	Small, Agricultural, Former industrial	0%
Heiloo	Small, Residential	0%
Leusden	Small, Green	0%
Culemborg	Small, Former industrial, New town	0%
Baarn	Small, Green	0%
Deventer	Medium, Centre	0%
Mook en Middelaar	Small, Green, Residential, Shrink, Tourist	0%
Veldhoven	Small, Former industrial, Work	0%
Wijk bij Duurstede	Small, Residential	0%
Eindhoven	Large, Centre, Former industrial, Growth, Work	0%
Zwartewaterland	Small, Agricultural	0%
Elburg	Small, Green	0%
Apeldoorn	Large, Centre, Green, Work	0%
Heumen	Small, New town, Residential	0%

Zeewolde	Small, Growth, New town	0%
Amstelveen	Medium, Growth, Work	0%
Noordwijk	Small, Green, Tourist, Work	0%
Waterland	Small, Historic, Residential, Tourist	0%
Doetinchem	Medium, Work	0%
Ede	Large, Centre, Green, Growth	0%
Valkenburg aan de Geul	Small, Shrink, Tourist	0%
Dinkelland	Small, Agricultural	0%
Woerden	Medium, Agricultural, Growth	0%
Dalfsen	Small, Agricultural, Growth	0%
Hellendoorn	Small, Former industrial, Green	0%
Hilversum	Medium, Centre, Green, Growth	1%
Hendrik-Ido-Ambacht	Small, Former industrial, Growth, New town, Residential	1%
Gulpen-Wittem	Small, Agricultural, Historic, Residential, Shrink, Tourist	1%
Tubbergen	Small, Agricultural, New town	1%
Losser	Small, Former industrial	1%
Breda	Large, Centre, Growth, Work	1%
Staphorst	Small, Agricultural, Growth, Historic	1%
Houten	Small, Growth, New town	1%
Ouder-Amstel	Small, Work	1%
Koggenland	Small, Agricultural, Growth, New town	1%
Lopik	Small, Agricultural, Historic	1%
Wageningen	Small, Growth	1%
Delft	Large, Centre, Growth, Historic	1%
Kampen	Medium, Growth, Historic	1%
Arnhem	Large, Centre, Green, Growth, Tourist, Work	1%
Langedijk	Small, Growth, New town, Residential	2%
Heusden	Small, Former industrial, Residential	2%
Landsmeer	Small, Former industrial, Growth, Residential, Tourist	2%
Krimpenerwaard	Medium, Agricultural	3%
Middelburg	Small, Centre, Historic	3%
Urk	Small, Growth, New town	4%
Oldenzaal	Small, Former industrial, Work	4%
Midden-Delfland	Small, Agricultural, Growth, New town	6%
Pijnacker-Nootdorp	Medium, Growth, New town, Residential	6%
Westland	Large, Centre, Growth, Work	9%
Schiermonnikoog	Small, Historic, Tourist	11%
Berkelland	Small, Agricultural, Shrink	12%
Terschelling	Small, Tourist	16%
Vlieland	Small, Historic, Tourist	19%
Ameland	Small, Growth, Historic, Tourist	36%

(Source: www.emissieregistratie.nl)