SDE+ tender Borssele december 2015

Wind farm site decisions (incl. EIA and crossings)

Soil, water, wind investigations wind farm sites

National consenting procedure TenneT substation and export cables

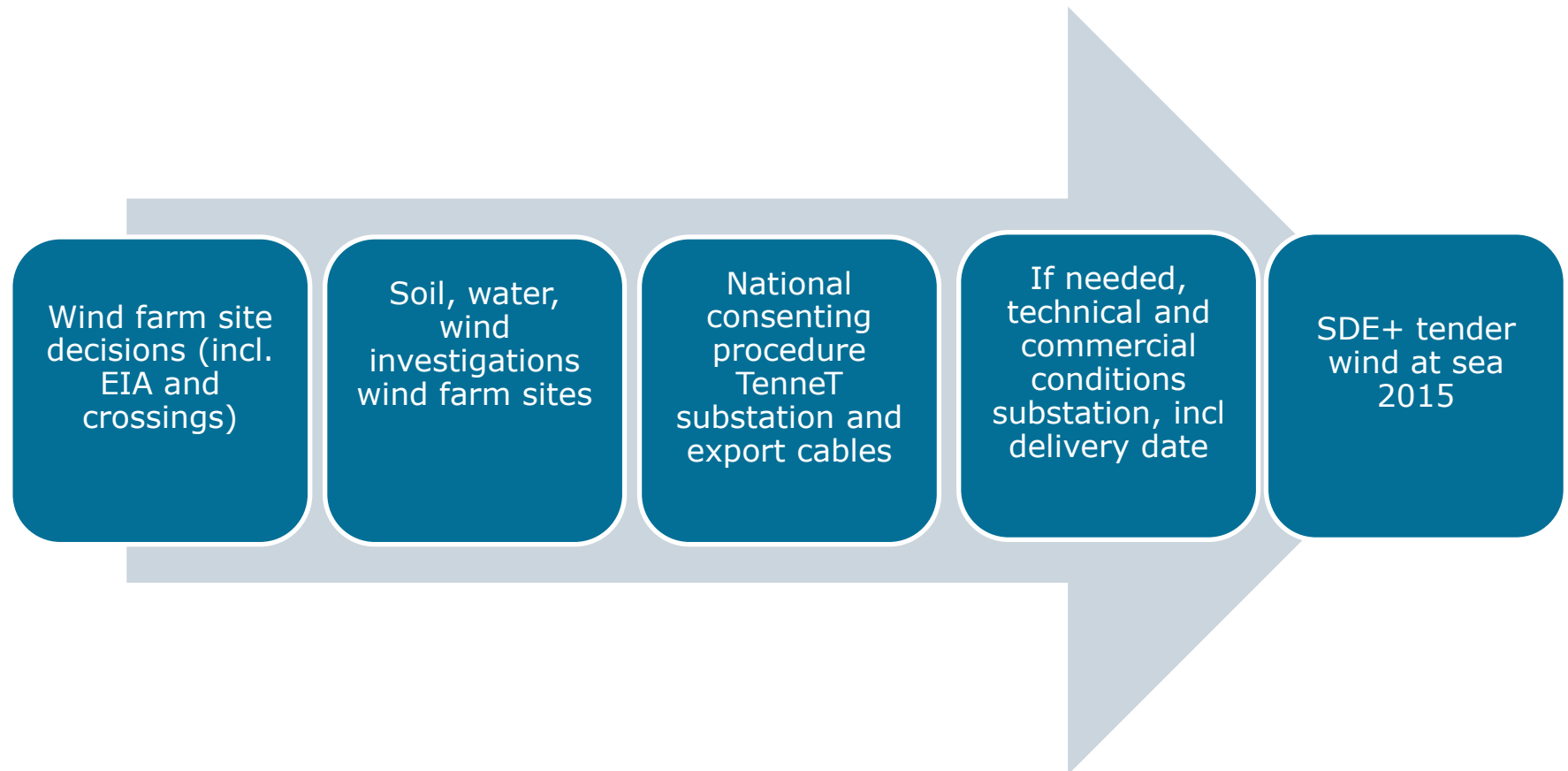If needed, technical and commercial conditions substation, incl delivery date

SDE+ tender wind at sea 2015

Progress SDE+ tender wind at sea

1. April: internet consultation adjustment SDE (RES grant)
2. October: workshop
3. November: letter to House of Representatives of the Netherlands including information about subsidies
4. Today: workshop
5. January 2015: stakeholder meeting
6. (January: 2015 adjustment SDE (RES grant) into force)
7. February/march: 2015 consultation ministerial regulation
8. April: concept regulation (public available)
9. September 2015: publication ministerial regulation
10. December 2015: opening tender

This meeting

So far:
- Multiple stakeholder meetings past 6 months
- Input sector on specific elements
- Adjustment Governmental Degree SDE+ (RES grant) and November letter SDE+

This meeting:
- Results process so far
- Three specific questions
- Concept calculation ECN

Next:
- Stakeholder meeting January on milestones and bank guaranties
- February/March consultation ministerial regulation

Workshop questions

- **Question 1: how much time is needed to prepare a bid?**

- **Question 2: how much time is needed after subsidy to produce electricity?**

- **Question 3: Datamonitor: transparency on operating asset availability and performance. HOW?**
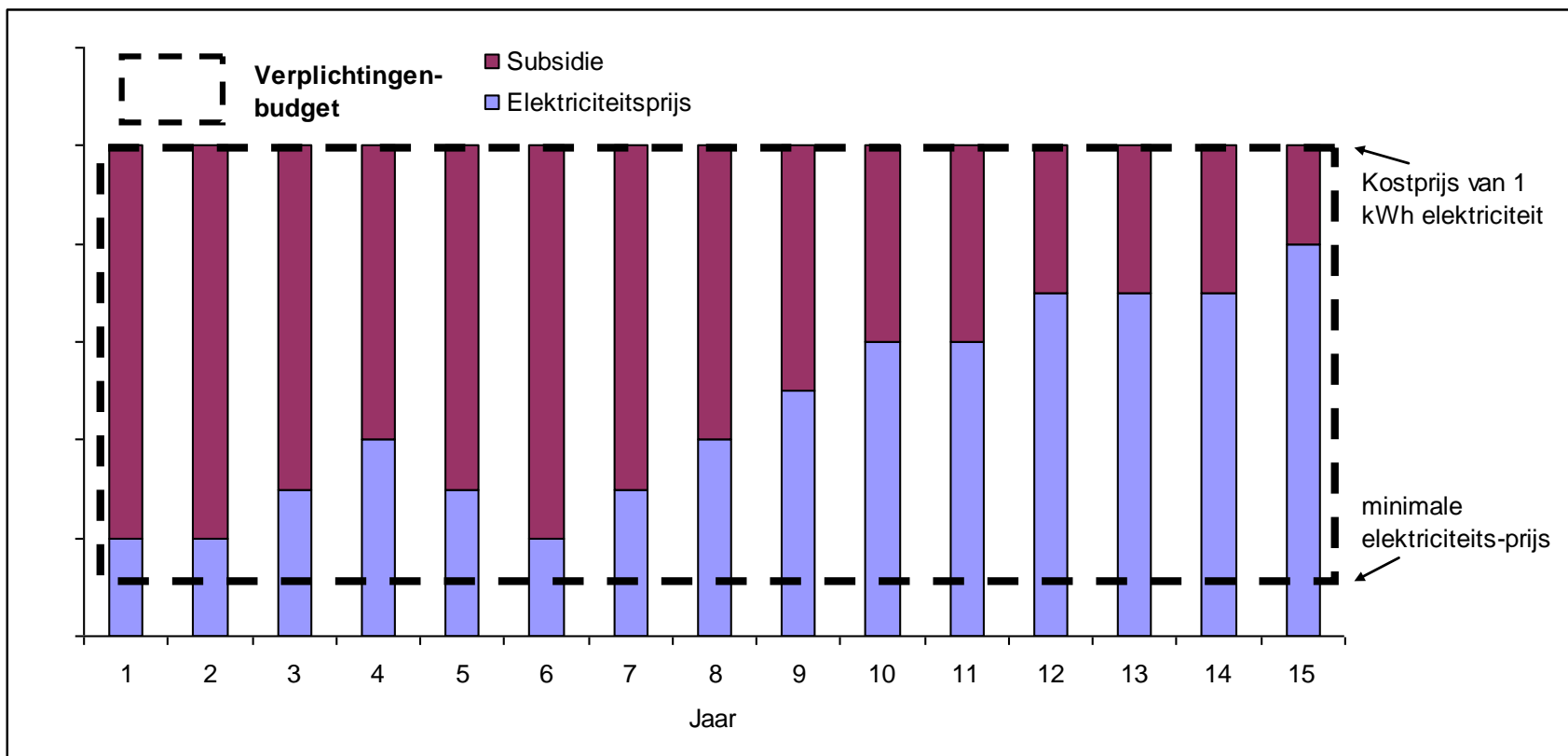
November letter

Letter to House of Representatives of the Netherlands on 11th of November 2014:

– Banking: higher energy production in any year can be used for subsidy in years to come, if production is lower
- Separate tender in 2015 of total 700 MW (two sites)
- Lowest offer gets subsidy
- Offer should be lower then the maximum
- More details will be send to House of Representatives in 2015

1. Conditions

1) Wind farm site decision
2) MW range

Minimal number of MW per site
1 site: (number of MW wind farm site decision +1) – MW of one turbine
2 site: minimum site I + minimum site II

<u>For example Borssele with 6 MW turbines</u>
Site I 340MW: (340+1)- 6= **335**
Site II 360MW: (360+1)- 6= **355**
Site I en II 700MW: 335 + 355 = **690**

Maximum number of MW
Approximately 5% (20 MW) - 10% (35 MW) per site overplanting allowed
= 370 – 385 MW (still under discussion, all so depending on input TenneT)

2. Lowest bid wins the tender

- Only 1 winner per site, but 1 participant can win 2 sites.

- The winner is the participant with the lowest bid on the combination of site I and site II, unless a combination of two separate bids on site I and site II is the lowest. The combination is calculated based on a weighted average (based on number of MW in the wind farm site decision).

Calculation

$$\frac{(\text{Bid site I} * \text{standard MW site I}) + (\text{Bid site II} * \text{standard MW site II})}{700 \text{ MW}}$$

2. Lowest bid wins the tender – example

	Site I (360MW)		Site II (340MW)		Site I & II		Calculation EZ
Bod A	**11,6**	360MW					
Bod B	12,2	360MW					
Bod C			13,3	343 MW			
Bod D			**13**	336 MW			
Bod E					12,5	703 MW	
Bod F					12,4	696 MW	
Combi A/D							*12,28*

Calculation

$$\frac{(11,6*360)+(13*340)}{700}$$

Opening and closing date tender

Tender opens December 2015

Closing date ? (previous tender 2 months after opening)

Question: how much time is needed to prepare a bid?

Realisation period

One site of 350 MW

| FID | 4 years | + | 1 year |

Two sites of in total 700MW

| FID | 5 years | + | 1 year |

Energy agreement: 4 years, maybe shorter

**Question: how much time is needed after subsidy to produce electricity?**

Subsidy period

15 years subsidy period with one extra year:

1. A good wind year (>P50): extra production can be taken to next years
2. A slow wind year (<P50): not consumed subsidy can be taken to next years
3. Year 16 to pay out remaining subsidy

Subsidy period – total based on P50 (= in this example 5000VU)
Starting with a slow wind year
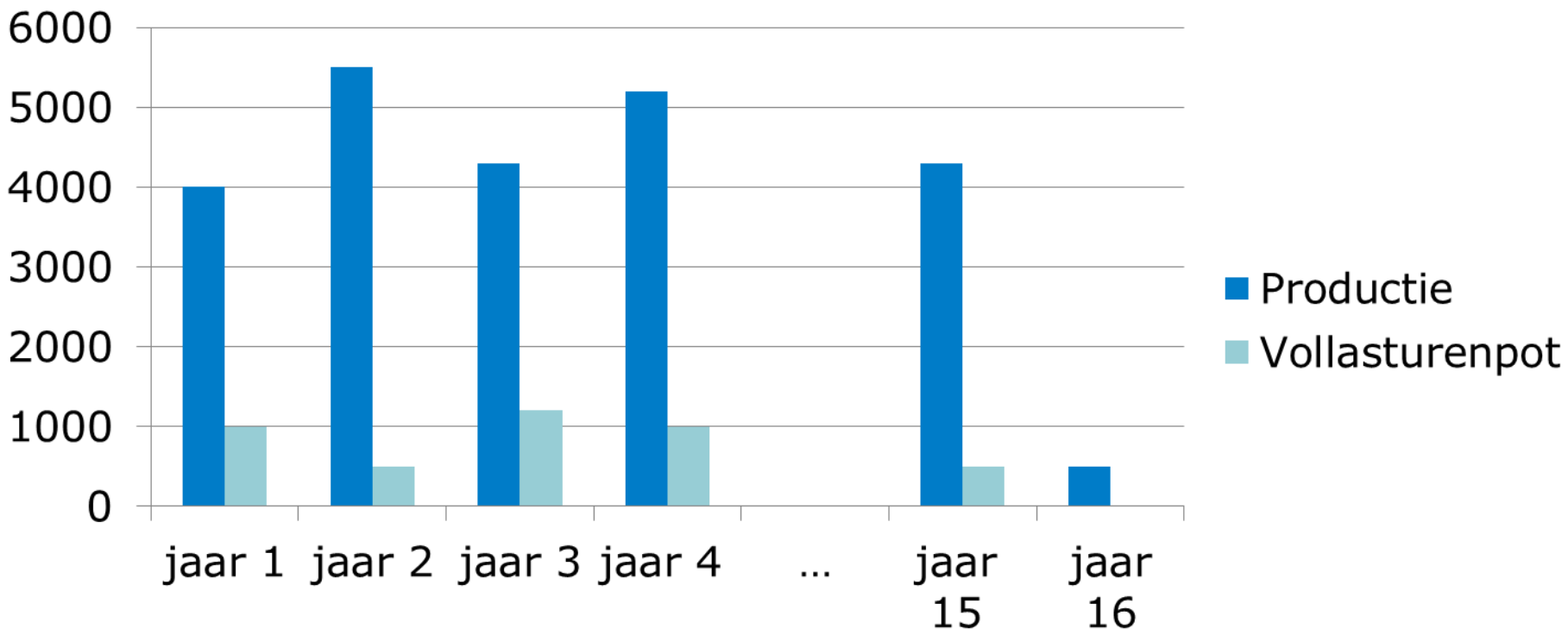
Max. total amount of subsidy

Max. total amount of subsidy = MW*(TB-BEP)*VU*JR

MW = Max MW (overplanting)

TB = Max tender bid

BEP = Energy floor price

VU = Full load hours

JR = Years (15)

Datamonitor: transparency on operating asset availability and performance. **HOW?**

- **The SPARTA** (*System Performance, Availability and Reliability Trend Analysis*) - Crown estate.

- The outputs from the database will include clarity for individual participants to see where their greatest opportunity for improvement exists through benchmarking.

THE INDIVIDUAL OWNER/OPERATOR VIEW

Ministerie van
Economische Zaken
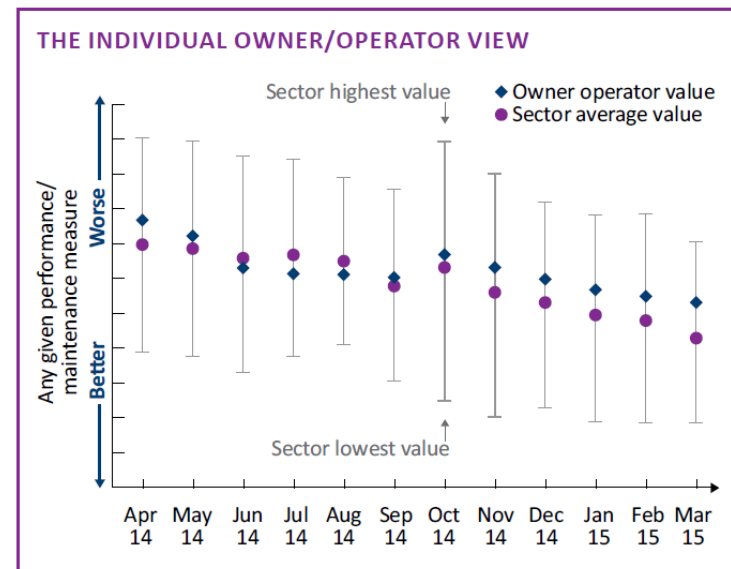
Base amount (€ ct/MWh)

Step 1 Energy Agreement - based on an average wind farm site and 40% cost reduction -	Step 2 Subtract the grid costs	Step 3 Zone base amount - ECN calculates the base amount per zone Borssele, HK Z en HK N. -	Step 4 Site base amount - ECN calculates base amount per site base of 350 MW ('kavelbesluit') -
2015 14,5			
2016 14			
2017 13,5			
2018 13			
2019 12,5			

Zone base amount including grid costs

Tabel 1: Maximum tenderbedragen per gebied [€/MWh]

Jaar van uitgifte	Maximum cf. Energieakkoord	Borssele	Zuid-Hollandse kust	Noord-Hollandse kust
2014	150			
2015	145	**144**	138	138
2016	140	**139**	133	133
2017	135	134	**128**	128
2018	130	129	**123**	123
2019	125	124	118	**118**
2020	120	119	113	113
2021	115	114	108	108
2022	110	109	103	103
2023	105	104	98	98

Vetgedrukte waardes in tabel 6 corresponderen met het schema uit de kamerbrief van 26 september 2014.

Zone base amount excluding grid costs

Tabel 1: Maximum tenderbedragen t.g.v. coördinatierol TenneT

| Jaar van uitgifte	Maximum cf. Energieakkoord	Borssele	Zuid-Hollandse kust	Noord-Hollandse kust
2014	150 minus net			
2015	145 minus net	**119**	120	119
2016	140 minus net	**116**	116	115
2017	135 minus net	112	**113**	112
2018	130 minus net	109	**109**	108
2019	125 minus net	105	106	**105**
2020	120 minus net	102	102	101
2021	115 minus net	98	99	98
2022	110 minus net	95	95	94
2023	105 minus net	91	92	91

Process

- ECN/DNV GL advises Economic Affairs on the base amount of offshore wind.
- Explanation of the agreements in the Energy Agreement is the responsibility of the Energy Agreement parties
  - base amount average site including grid cost 150 €/MWh
  - yearly reduction including grid cost is average 5 €/MWh

- ECN/DNV GL consults market in January 2015
- Definite advise ECN/DNV GL end of February 2015

Site base amount?
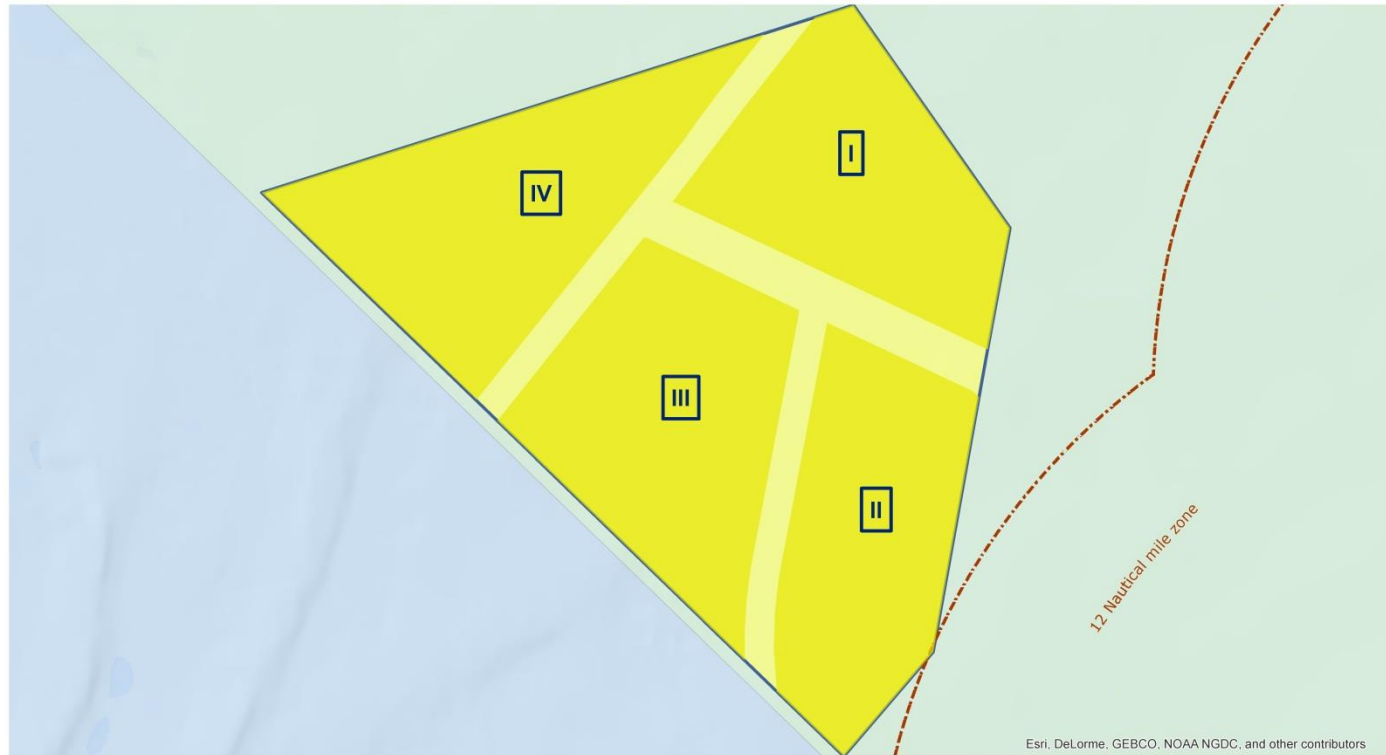
Legend
- Voorgestelde verkaveling
- 12 Nautical mile zone
- Designated Windfarms Zone
- Continental Netherlands

A4 - scale   1:160.000