



# Symphony

Integrerat planeringsstöd för svensk havsplanering

Västerhavet

S4 Utblick 2030 med plan

Teknisk rapport till Havs- och vattenmyndigheten

Samrådsversion år 2018

2018-03-23

**Symphony**  
**Integrerat planeringsstöd för svensk havsplanering**  
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**S4 Utblick 2030 med plan**  
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**Samrådsversion år 2018**

Rapportdatum: 2018-03-23  
Version: Samrådsversion år 2018  
Projektnummer: 3481

Uppdragsgivare: Havs- och vattenmyndigheten

Utförare: Medins Havs och Vattenkonsulter AB  
Företagsvägen 2, 435 33 Mölnlycke  
Tel +46 31-338 35 40 | [www.medinsab.se](http://www.medinsab.se) | Org. nr 556389-2545

Författare: Martin Mattsson, Jonatan Hammar och Jenny Palmkvist

Bilder: Omslaget visar Symphony Nuläge

## **Denna katalog är en del av Symphony**

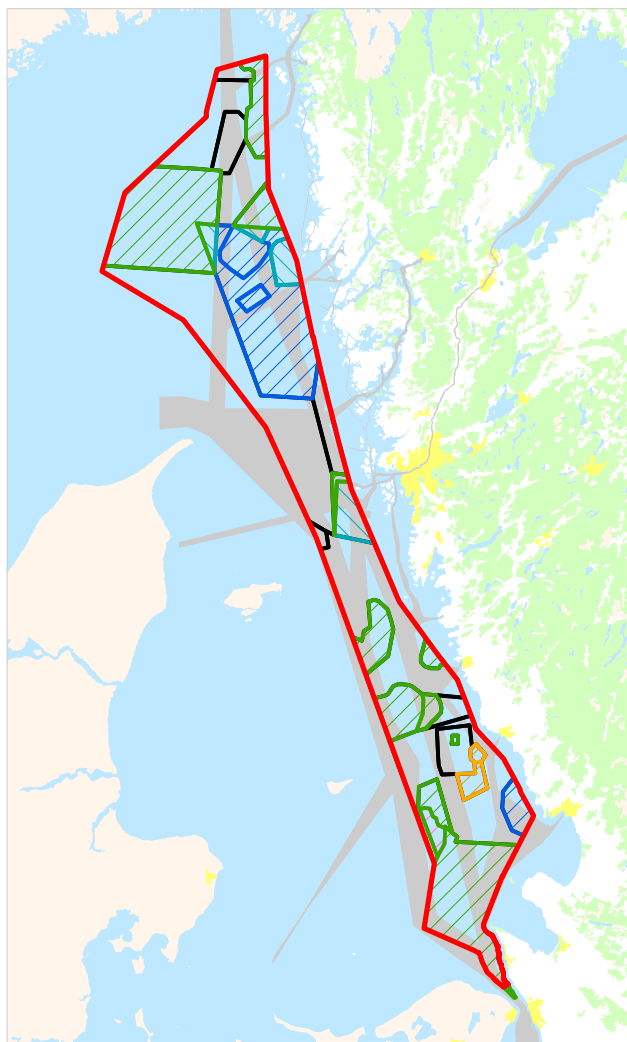
Metodbeskrivning publiceras i Havs- och vattenmyndighetens rapport 2018:1. Katalogen är ett renodlat planeringsstöd. Denna version (S4) visar scenariot när havsplanen har implementerats år 2030.

Analyser av kumulativ miljöpåverkan har gjorts genom Symphony. Beräkningar har utförts i SyM som är utvecklad av Medins Havs och Vattenkonsulter AB.

Katalogen har tagits fram av Martin Mattsson, Jonatan Hammar och Jenny Palmkvist.

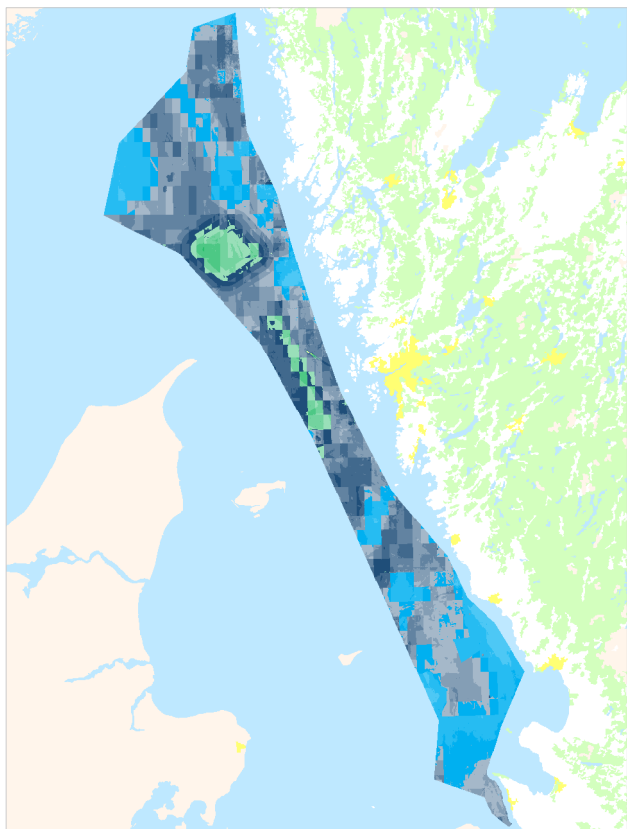
I rapporten benämns scenarierna (S) enligt följande:

- S1 Nuläge
- S2 Nuläge plan
- S3 Utblick 2030
- S4 Utblick 2030 med plan



S4 plan 2030

S4 plan 2030 - Nollalternativ 2030.



## Impacts Per Pressure

| Name                             | % of Total<br>S4 | (S3)    |
|----------------------------------|------------------|---------|
| Eutrophication                   |                  |         |
| Phosphorous Background           | 2.23             | (2.22)  |
| Anoxia Background                | 3.15             | (3.13)  |
| Nitrogen Background              | 21.06            | (20.97) |
| Total                            | 26.44            | (26.32) |
| General pollution                |                  |         |
| Tox Metal Background             | 2.3              | (2.29)  |
| Oilspill 2knots Wreck            | 0.59             | (0.58)  |
| Tox Synthetic Background         | 10.53            | (10.49) |
| Tox Munition                     | 3.83             | (3.82)  |
| Tox Mine Risk                    | 0.23             | (0.23)  |
| Total                            | 17.48            | (17.41) |
| Shipping                         |                  |         |
| Turbidity Shipping               | 0.02             | (0.02)  |
| Noise 2000Hz Shipping            | 0.02             | (0.02)  |
| Oilspill 2knots Shipping         | 1.99             | (1.98)  |
| Noise 125Hz Shipping             | 11.11            | (11.06) |
| Total                            | 13.14            | (13.08) |
| Coastal development              |                  |         |
| Tox Synthetic Treatmentplants    | 0.0              | (0.0)   |
| Habitatloss Dumping              | 0.01             | (0.01)  |
| Infrastructure                   | 0.0              | (0.0)   |
| Habitatloss Coastal Exploitation | 0.0              | (0.0)   |
| Total                            | 0.01             | (0.01)  |
| Recreational activities          |                  |         |
| Boating Pollution                | 0.07             | (0.07)  |
| Boating Noise                    | 0.02             | (0.02)  |
| Birdhunt                         | 0.05             | (0.05)  |
| Total                            | 0.14             | (0.14)  |
| Fisheries                        |                  |         |
| Abrasion Bottomtrawl             | 21.16            | (21.05) |
| Catch Gillnet                    | 0.43             | (0.43)  |
| Turbidity Bottom trawl           | 9.5              | (9.45)  |
| Catch Bottom trawl               | 10.83            | (11.19) |
| Catch Pelagic trawl              | 0.19             | (0.2)   |
| Total                            | 42.12            | (42.33) |
| Industry                         |                  |         |
| Tox Synthetic Industry           | 0.0              | (0.0)   |
| Tox Synthetic Harbor             | 0.0              | (0.0)   |
| Total                            | 0.0              | (0.0)   |
| Mineral mining                   |                  |         |
| Turbidity Mining                 | 0.0              | (0.0)   |
| Habitat Loss Mining              | 0.0              | (0.0)   |
| Total                            | 0.0              | (0.0)   |
| Defence                          |                  |         |
| Tox Metal Military               | 0.02             | (0.02)  |
| Explosion SPL                    | 0.62             | (0.68)  |
| Explosion PM                     | 0.0              | (0.0)   |
| Total                            | 0.64             | (0.7)   |
| Aquaculture                      |                  |         |
| Habitatloss Musselfarming        | 0.0              | (0.0)   |
| Total                            | 0.0              | (0.0)   |
| Energy                           |                  |         |
| Avoidance Windpower              | 0.01             | (0.0)   |
| Noise 125Hz Windpower            | 0.03             | (0.0)   |
| EMF                              | 0.01             | (0.01)  |
| Total                            | 0.04             | (0.01)  |

## Västerhavet

### Cumulative Effect

|           | S4           | (S3)           |
|-----------|--------------|----------------|
| Total     | 3732766002.4 | (3748885086.4) |
| Mean      | 23986.3      | (24089.8)      |
| Std. Dev. | 8416.5       | (8377.6)       |
| Min       | 5259.7       | (5259.7)       |
| Max       | 66814.7      | (66814.7)      |
| Area km²  | 9727.68      |                |

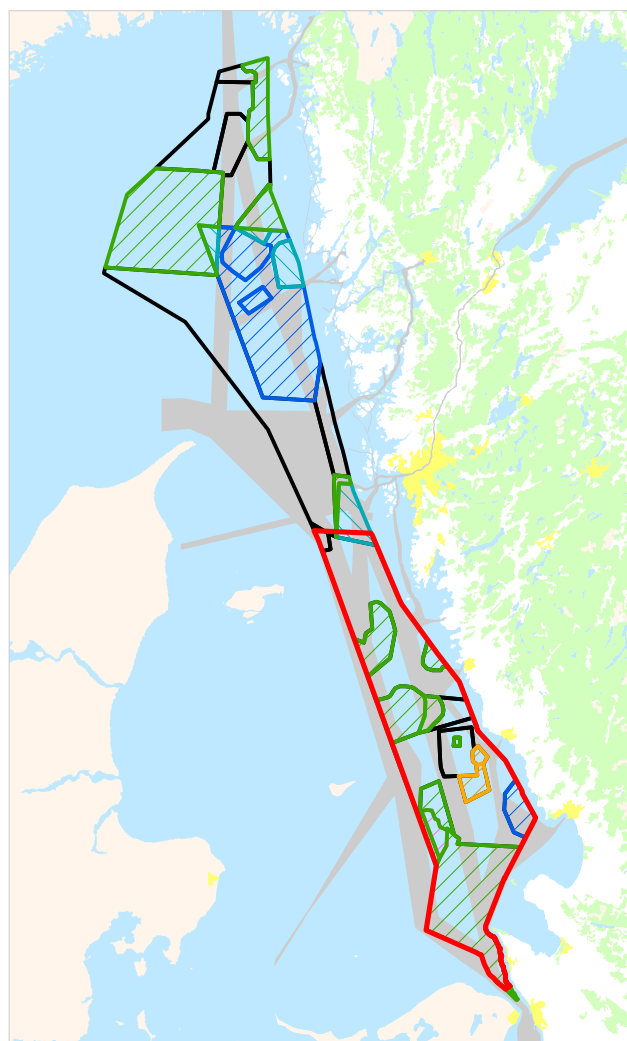
### Impacts Per Ecocomponent

| Name                    | % of Total<br>S4 | (S3)    |
|-------------------------|------------------|---------|
| Softbottom Deep         | 18.98            | (18.95) |
| Spawning Fish           | 14.58            | (14.66) |
| Cod                     | 12.67            | (12.63) |
| Softbottom Aphotic      | 10.8             | (10.81) |
| Porpoise Northsea       | 9.46             | (9.49)  |
| Plankton Community      | 9.31             | (9.27)  |
| Herring                 | 6.63             | (6.63)  |
| Harbour Seals           | 4.92             | (4.89)  |
| Sprat                   | 3.48             | (3.5)   |
| Softbottom Photoc       | 2.23             | (2.23)  |
| Porpoise Beltsea        | 1.83             | (1.85)  |
| Transportbottom Aphotic | 1.42             | (1.42)  |
| Transportbottom Photoc  | 0.82             | (0.82)  |
| Eel Migration           | 0.67             | (0.67)  |
| Seabird Winter Offshore | 0.61             | (0.6)   |
| Transportbottom Deep    | 0.47             | (0.47)  |
| Hardbottom Deep         | 0.38             | (0.38)  |
| Hardbottom Aphotic      | 0.26             | (0.26)  |
| Hardbottom Photoc       | 0.22             | (0.23)  |
| Birds Coastal           | 0.1              | (0.1)   |
| Deep Reef               | 0.09             | (0.09)  |
| Artificial Reefs Total  | 0.03             | (0.03)  |
| Seabird Winter Coastal  | 0.02             | (0.02)  |
| Mussel Reefs Total      | 0.02             | (0.02)  |
| Haploops Reef           | 0.0              | (0.0)   |
| Shoreline Complexity    | 0.0              | (0.0)   |
| Angiosperms             | 0.0              | (0.0)   |
| Rivermouth Fish         | 0.0              | (0.0)   |
| Grey Seals              | 0.0              | (0.0)   |

Calculated with SyM

Date: 2018-03-22

Medins Havs och Vattenkonsulter AB

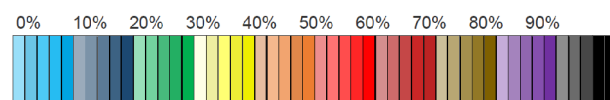


| Kattegatt                                           |      |
|-----------------------------------------------------|------|
| Miljöpåverkan i området jämfört med medelvärde för: |      |
| S4 Kattegatt                                        | 100% |
| S4 Västerhavet                                      | 87%  |
| S3 framtidsscenario år 2030                         | 100% |

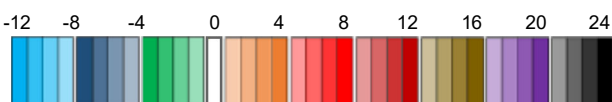
#### Områden och huvudanvändning



Procentuell andel av den högsta miljöpåverkan i Västerhavet, inklusive kustområden (S4)

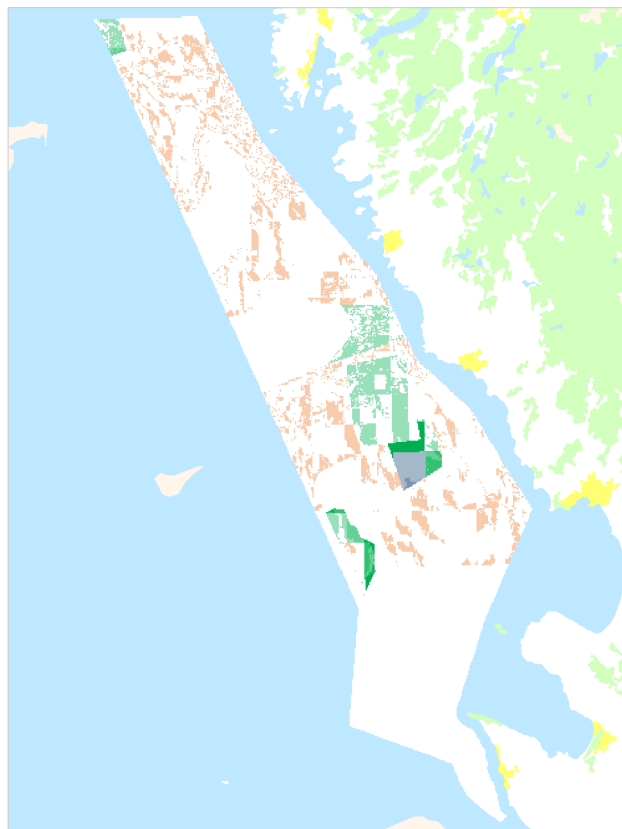
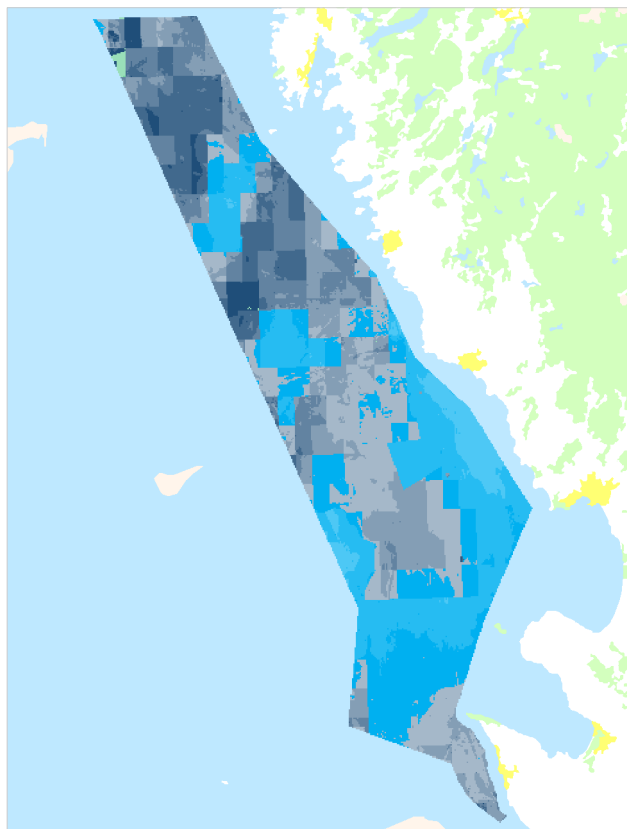


S4 plan 2030 - S3 Nollalternativ 2030.  
S4, S3 uttryckt som procentuell andel av den högsta miljöpåverkan i Västerhavet, inklusive kustområden.



S4 plan 2030

S4 plan 2030 - Nollalternativ 2030.



## Impacts Per Pressure

| Name                             | % of Total<br>S4 | (S3)    |
|----------------------------------|------------------|---------|
| Eutrophication                   |                  |         |
| Phosphorous Background           | 2.77             | (2.76)  |
| Anoxia Background                | 7.48             | (7.47)  |
| Nitrogen Background              | 23.28            | (23.24) |
| Total                            | 33.53            | (33.47) |
| General pollution                |                  |         |
| Tox Metal Background             | 3.33             | (3.32)  |
| Oilspill 2knots Wreck            | 0.46             | (0.46)  |
| Tox Synthetic Background         | 9.05             | (9.03)  |
| Tox Munition                     | 0.0              | (0.0)   |
| Tox Mine Risk                    | 0.22             | (0.22)  |
| Total                            | 13.06            | (13.04) |
| Shipping                         |                  |         |
| Turbidity Shipping               | 0.05             | (0.05)  |
| Noise 2000Hz Shipping            | 0.05             | (0.05)  |
| Oilspill 2knots Shipping         | 2.38             | (2.38)  |
| Noise 125Hz Shipping             | 16.65            | (16.62) |
| Total                            | 19.13            | (19.1)  |
| Coastal development              |                  |         |
| Tox Synthetic Treatmentplants    | 0.0              | (0.0)   |
| Habitatloss Dumping              | 0.03             | (0.03)  |
| Infrastructure                   | 0.0              | (0.0)   |
| Habitatloss Coastal Exploitation | 0.0              | (0.0)   |
| Total                            | 0.03             | (0.03)  |
| Recreational activities          |                  |         |
| Boating Pollution                | 0.07             | (0.07)  |
| Boating Noise                    | 0.02             | (0.02)  |
| Birdhunt                         | 0.07             | (0.07)  |
| Total                            | 0.16             | (0.16)  |
| Fisheries                        |                  |         |
| Abrasion Bottomtrawl             | 18.21            | (18.12) |
| Catch Gillnet                    | 0.13             | (0.14)  |
| Turbidity Bottom trawl           | 7.32             | (7.28)  |
| Catch Bottom trawl               | 8.16             | (8.48)  |
| Catch Pelagic trawl              | 0.1              | (0.1)   |
| Total                            | 33.92            | (34.12) |
| Industry                         |                  |         |
| Tox Synthetic Industry           | 0.0              | (0.0)   |
| Tox Synthetic Harbor             | 0.0              | (0.0)   |
| Total                            | 0.0              | (0.0)   |
| Mineral mining                   |                  |         |
| Turbidity Mining                 | 0.0              | (0.0)   |
| Habitat Loss Mining              | 0.0              | (0.0)   |
| Total                            | 0.0              | (0.0)   |
| Defence                          |                  |         |
| Tox Metal Military               | 0.05             | (0.05)  |
| Explosion SPL                    | 0.0              | (0.0)   |
| Explosion PM                     | 0.0              | (0.0)   |
| Total                            | 0.05             | (0.05)  |
| Aquaculture                      |                  |         |
| Habitatloss Mussel farming       | 0.0              | (0.0)   |
| Total                            | 0.0              | (0.0)   |
| Energy                           |                  |         |
| Avoidance Windpower              | 0.02             | (0.01)  |
| Noise 125Hz Windpower            | 0.07             | (0.01)  |
| EMF                              | 0.02             | (0.02)  |
| Total                            | 0.12             | (0.04)  |

## Kattegatt

### Cumulative Effect

|           | S4           | (S3)           |
|-----------|--------------|----------------|
| Total     | 1333769569.6 | (1336154818.4) |
| Mean      | 20792.7      | (20829.9)      |
| Std. Dev. | 6884.1       | (6660.6)       |
| Min       | 8478.0       | (8297.0)       |
| Max       | 42281.2      | (42124.5)      |
| Area km²  | 4010.9       |                |

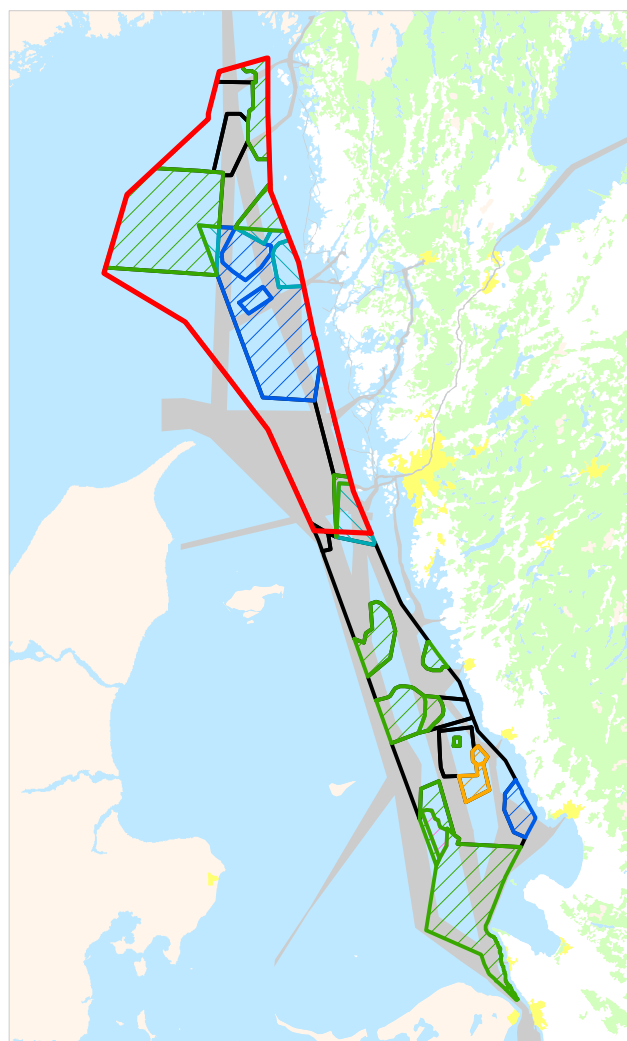
### Impacts Per Ecocomponent

| Name                    | % of Total<br>S4 | (S3)    |
|-------------------------|------------------|---------|
| Softbottom Aphotic      | 22.41            | (22.49) |
| Spawning Fish           | 12.89            | (13.0)  |
| Cod                     | 11.86            | (11.83) |
| Plankton Community      | 9.03             | (9.01)  |
| Porpoise Northsea       | 6.27             | (6.22)  |
| Softbottom Photoc       | 6.22             | (6.23)  |
| Porpoise Beltsea        | 5.12             | (5.19)  |
| Harbour Seals           | 5.01             | (4.95)  |
| Herring                 | 4.28             | (4.25)  |
| Sprat                   | 3.68             | (3.68)  |
| Softbottom Deep         | 3.59             | (3.52)  |
| Transportbottom Aphotic | 2.82             | (2.82)  |
| Transportbottom Photoc  | 2.25             | (2.27)  |
| Seabird Winter Offshore | 1.71             | (1.69)  |
| Eel Migration           | 1.68             | (1.67)  |
| Hardbottom Photoc       | 0.52             | (0.52)  |
| Hardbottom Deep         | 0.28             | (0.28)  |
| Transportbottom Deep    | 0.11             | (0.11)  |
| Birds Coastal           | 0.11             | (0.11)  |
| Seabird Winter Coastal  | 0.04             | (0.04)  |
| Artificial Reefs Total  | 0.04             | (0.04)  |
| Deep Reef               | 0.03             | (0.03)  |
| Hardbottom Aphotic      | 0.03             | (0.02)  |
| Mussel Reefs Total      | 0.02             | (0.02)  |
| Haploops Reef           | 0.0              | (0.0)   |
| Shoreline Complexity    | 0.0              | (0.0)   |
| Angiosperms             | 0.0              | (0.0)   |
| Grey Seals              | 0.0              | (0.0)   |
| Rivermouth Fish         | 0.0              | (0.0)   |

Calculated with SyM

Date: 2018-03-22

Medins Havs och Vattenkonsulter AB

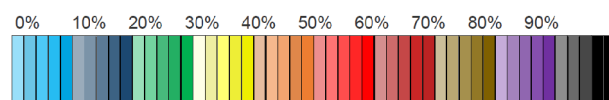


| Skagerrak                                           |      |
|-----------------------------------------------------|------|
| Miljöpåverkan i området jämfört med medelvärde för: |      |
| S4 Skagerrak                                        | 100% |
| S4 Västerhavet                                      | 109% |
| S3 framtidsscenario år 2030                         | 99%  |

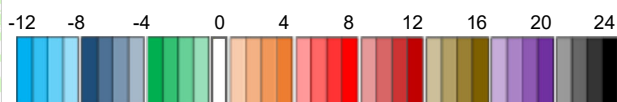
Områden och huvudanvändning



Procentuell andel av den högsta miljöpåverkan i Västerhavet, inklusive kustområden (S4)

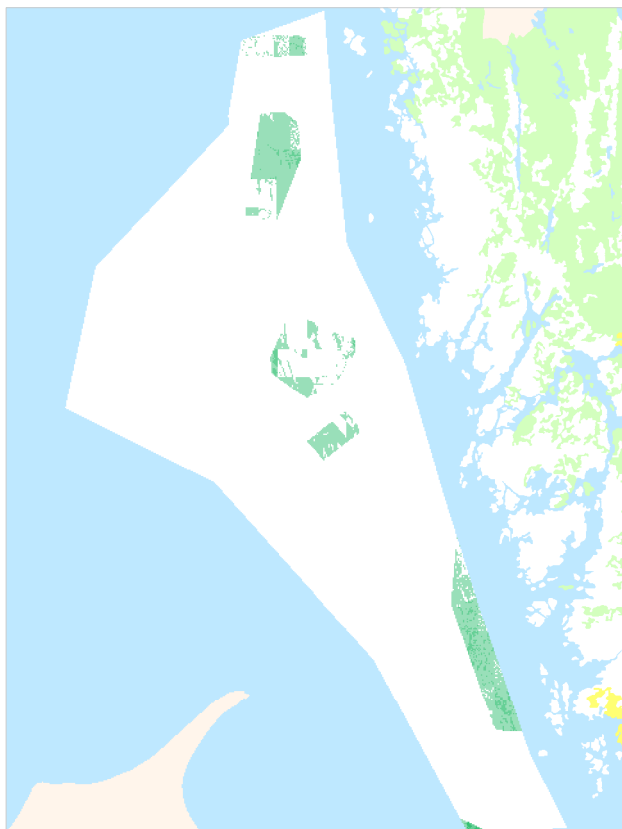
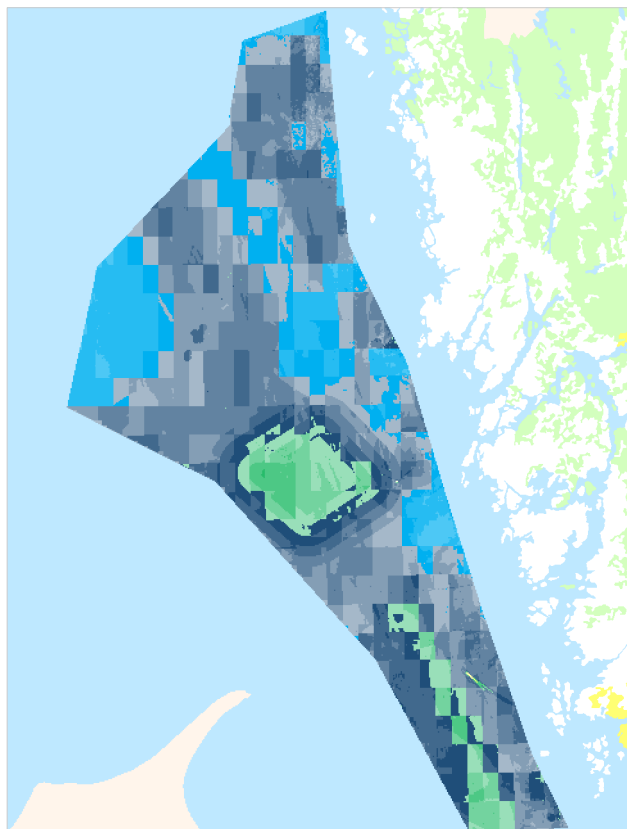


S4 plan 2030 - S3 Nollalternativ 2030.  
S4, S3 uttryckt som procentuell andel av den högsta miljöpåverkan i Västerhavet, inklusive kustområden.



S4 plan 2030

S4 plan 2030 - Nollalternativ 2030.



## Impacts Per Pressure

| Name                             | % of Total<br>S4 | (S3)    |
|----------------------------------|------------------|---------|
| Eutrophication                   |                  |         |
| Phosphorous Background           | 1.93             | (1.92)  |
| Anoxia Background                | 0.74             | (0.73)  |
| Nitrogen Background              | 19.82            | (19.71) |
| Total                            | 22.49            | (22.36) |
| General pollution                |                  |         |
| Tox Metal Background             | 1.73             | (1.72)  |
| Oilspill 2knots Wreck            | 0.66             | (0.65)  |
| Tox Synthetic Background         | 11.36            | (11.29) |
| Tox Munition                     | 5.96             | (5.93)  |
| Tox Mine Risk                    | 0.23             | (0.23)  |
| Total                            | 19.94            | (19.83) |
| Shipping                         |                  |         |
| Turbidity Shipping               | 0.0              | (0.0)   |
| Noise 2000Hz Shipping            | 0.01             | (0.01)  |
| Oilspill 2knots Shipping         | 1.77             | (1.76)  |
| Noise 125Hz Shipping             | 8.03             | (7.98)  |
| Total                            | 9.81             | (9.75)  |
| Coastal development              |                  |         |
| Tox Synthetic Treatmentplants    | 0.0              | (0.0)   |
| Habitatloss Dumping              | 0.0              | (0.0)   |
| Infrastructure                   | 0.0              | (0.0)   |
| Habitatloss Coastal Exploitation | 0.0              | (0.0)   |
| Total                            | 0.0              | (0.0)   |
| Recreational activities          |                  |         |
| Boating Pollution                | 0.07             | (0.06)  |
| Boating Noise                    | 0.02             | (0.02)  |
| Birdhunt                         | 0.03             | (0.03)  |
| Total                            | 0.12             | (0.12)  |
| Fisheries                        |                  |         |
| Abrasion Bottomtrawl             | 22.8             | (22.67) |
| Catch Gillnet                    | 0.59             | (0.6)   |
| Turbidity Bottom trawl           | 10.71            | (10.65) |
| Catch Bottom trawl               | 12.32            | (12.69) |
| Catch Pelagic trawl              | 0.25             | (0.26)  |
| Total                            | 46.67            | (46.87) |
| Industry                         |                  |         |
| Tox Synthetic Industry           | 0.0              | (0.0)   |
| Tox Synthetic Harbor             | 0.0              | (0.0)   |
| Total                            | 0.0              | (0.0)   |
| Mineral mining                   |                  |         |
| Turbidity Mining                 | 0.0              | (0.0)   |
| Habitat Loss Mining              | 0.0              | (0.0)   |
| Total                            | 0.0              | (0.0)   |
| Defence                          |                  |         |
| Tox Metal Military               | 0.0              | (0.0)   |
| Explosion SPL                    | 0.96             | (1.06)  |
| Explosion PM                     | 0.0              | (0.0)   |
| Total                            | 0.97             | (1.06)  |
| Aquaculture                      |                  |         |
| Habitatloss Musselfarming        | 0.0              | (0.0)   |
| Total                            | 0.0              | (0.0)   |
| Energy                           |                  |         |
| Avoidance Windpower              | 0.0              | (0.0)   |
| Noise 125Hz Windpower            | 0.0              | (0.0)   |
| EMF                              | 0.0              | (0.0)   |
| Total                            | 0.0              | (0.0)   |

## Skagerrak

### Cumulative Effect

|           | S4           | (S3)           |
|-----------|--------------|----------------|
| Total     | 2398996432.8 | (2412730268.0) |
| Mean      | 26225.7      | (26375.8)      |
| Std. Dev. | 8666.8       | (8695.6)       |
| Min       | 5259.7       | (5259.7)       |
| Max       | 66814.7      | (66814.7)      |
| Area km²  | 5716.9       |                |

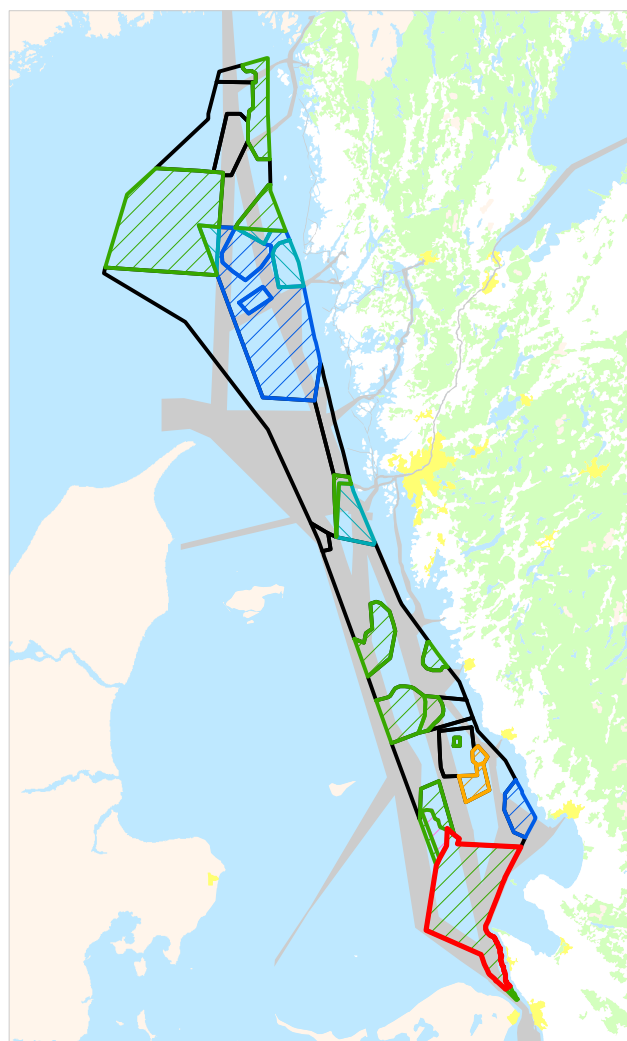
### Impacts Per Ecocomponent

| Name                    | % of Total<br>S4 | (S3)    |
|-------------------------|------------------|---------|
| Softbottom Deep         | 27.54            | (27.5)  |
| Spawning Fish           | 15.52            | (15.57) |
| Cod                     | 13.11            | (13.06) |
| Porpoise Northsea       | 11.24            | (11.3)  |
| Plankton Community      | 9.46             | (9.41)  |
| Herring                 | 7.93             | (7.94)  |
| Harbour Seals           | 4.87             | (4.86)  |
| Softbottom Aphotic      | 4.35             | (4.34)  |
| Sprat                   | 3.37             | (3.4)   |
| Transportbottom Deep    | 0.67             | (0.68)  |
| Transportbottom Aphotic | 0.64             | (0.64)  |
| Hardbottom Deep         | 0.44             | (0.44)  |
| Hardbottom Aphotic      | 0.38             | (0.39)  |
| Deep Reef               | 0.13             | (0.12)  |
| Eel Migration           | 0.11             | (0.11)  |
| Birds Coastal           | 0.1              | (0.1)   |
| Hardbottom Photic       | 0.06             | (0.06)  |
| Artificial Reefs Total  | 0.02             | (0.02)  |
| Mussel Reefs Total      | 0.02             | (0.02)  |
| Transportbottom Photic  | 0.02             | (0.02)  |
| Softbottom Photic       | 0.01             | (0.01)  |
| Seabird Winter Coastal  | 0.01             | (0.01)  |
| Seabird Winter Offshore | 0.0              | (0.0)   |
| Haploops Reef           | 0.0              | (0.0)   |
| Angiosperms             | 0.0              | (0.0)   |
| Rivermouth Fish         | 0.0              | (0.0)   |
| Shoreline Complexity    | 0.0              | (0.0)   |
| Grey Seals              | 0.0              | (0.0)   |
| Porpoise Beltsea        | 0.0              | (0.0)   |

Calculated with SyM

Date: 2018-03-22

Medins Havs och Vattenkonsulter AB



V300\_N

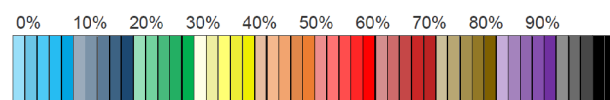
Miljöpåverkan i området jämfört med medelvärde för:

|                             |      |
|-----------------------------|------|
| S4 Västerhavet              | 73%  |
| S4 Kattegatt                | 84%  |
| S3 framtidsscenario år 2030 | 100% |

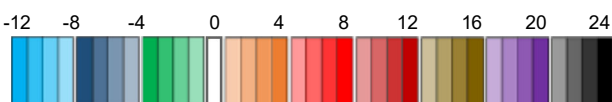
Områden och huvudanvändning



Procentuell andel av den högsta miljöpåverkan i Västerhavet, inklusive kustområden (S4)

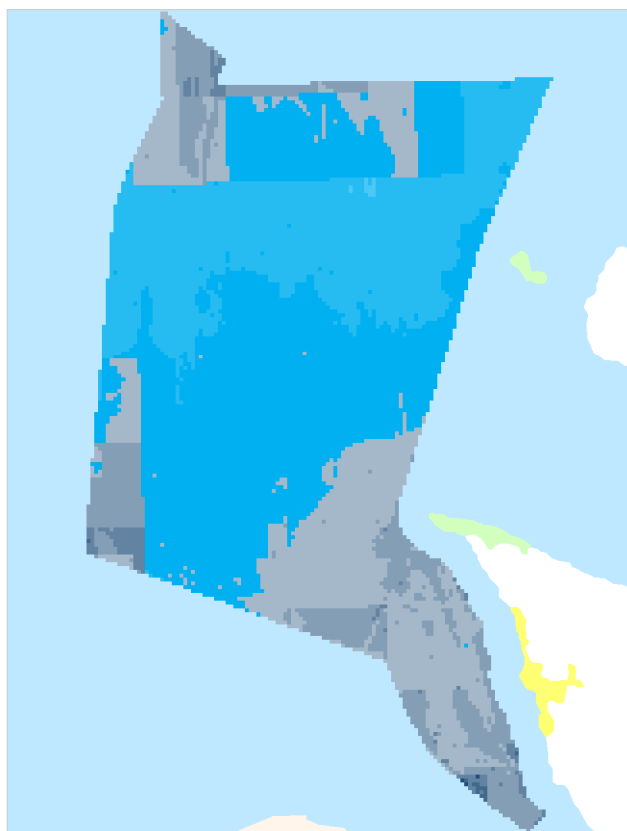


S4 plan 2030 - S3 Nollalternativ 2030.  
S4, S3 uttryckt som procentuell andel av den högsta miljöpåverkan i Västerhavet, inklusive kustområden.



S4 plan 2030

S4 plan 2030 - Nollalternativ 2030.



## Impacts Per Pressure

| Name                             | % of Total<br>S4 | (S3)    |
|----------------------------------|------------------|---------|
| Eutrophication                   |                  |         |
| Phosphorous Background           | 3.36             | (3.36)  |
| Anoxia Background                | 12.83            | (12.83) |
| Nitrogen Background              | 28.09            | (28.09) |
| Total                            | 44.27            | (44.27) |
| General pollution                |                  |         |
| Tox Metal Background             | 6.2              | (6.2)   |
| Oilspill 2knots Wreck            | 2.07             | (2.07)  |
| Tox Synthetic Background         | 10.63            | (10.63) |
| Tox Munition                     | 0.0              | (0.0)   |
| Tox Mine Risk                    | 0.0              | (0.0)   |
| Total                            | 18.9             | (18.9)  |
| Shipping                         |                  |         |
| Turbidity Shipping               | 0.17             | (0.17)  |
| Noise 2000Hz Shipping            | 0.19             | (0.19)  |
| Oilspill 2knots Shipping         | 3.01             | (3.01)  |
| Noise 125Hz Shipping             | 21.13            | (21.13) |
| Total                            | 24.51            | (24.51) |
| Coastal development              |                  |         |
| Tox Synthetic Treatmentplants    | 0.0              | (0.0)   |
| Habitatloss Dumping              | 0.0              | (0.0)   |
| Infrastructure                   | 0.0              | (0.0)   |
| Habitatloss Coastal Exploitation | 0.0              | (0.0)   |
| Total                            | 0.0              | (0.0)   |
| Recreational activities          |                  |         |
| Boating Pollution                | 0.35             | (0.35)  |
| Boating Noise                    | 0.11             | (0.11)  |
| Birdhunt                         | 0.13             | (0.13)  |
| Total                            | 0.59             | (0.59)  |
| Fisheries                        |                  |         |
| Abrasion Bottomtrawl             | 7.21             | (7.21)  |
| Catch Gillnet                    | 0.15             | (0.15)  |
| Turbidity Bottom trawl           | 1.99             | (1.99)  |
| Catch Bottom trawl               | 2.38             | (2.38)  |
| Catch Pelagic trawl              | 0.0              | (0.0)   |
| Total                            | 11.72            | (11.72) |
| Industry                         |                  |         |
| Tox Synthetic Industry           | 0.0              | (0.0)   |
| Tox Synthetic Harbor             | 0.0              | (0.0)   |
| Total                            | 0.0              | (0.0)   |
| Mineral mining                   |                  |         |
| Turbidity Mining                 | 0.0              | (0.0)   |
| Habitat Loss Mining              | 0.0              | (0.0)   |
| Total                            | 0.0              | (0.0)   |
| Defence                          |                  |         |
| Tox Metal Military               | 0.0              | (0.0)   |
| Explosion SPL                    | 0.0              | (0.0)   |
| Explosion PM                     | 0.0              | (0.0)   |
| Total                            | 0.0              | (0.0)   |
| Aquaculture                      |                  |         |
| Habitatloss Mussel farming       | 0.0              | (0.0)   |
| Total                            | 0.0              | (0.0)   |
| Energy                           |                  |         |
| Avoidance Windpower              | 0.0              | (0.0)   |
| Noise 125Hz Windpower            | 0.0              | (0.0)   |
| EMF                              | 0.0              | (0.0)   |
| Total                            | 0.0              | (0.0)   |

V300\_N

## Cumulative Effect

|           | S4          | (S3)          |
|-----------|-------------|---------------|
| Total     | 244940165.9 | (244940165.9) |
| Mean      | 17547.1     | (17547.1)     |
| Std. Dev. | 3827.4      | (3827.4)      |
| Min       | 10458.9     | (10458.9)     |
| Max       | 36374.8     | (36374.8)     |
| Area km²  | 872.74      |               |

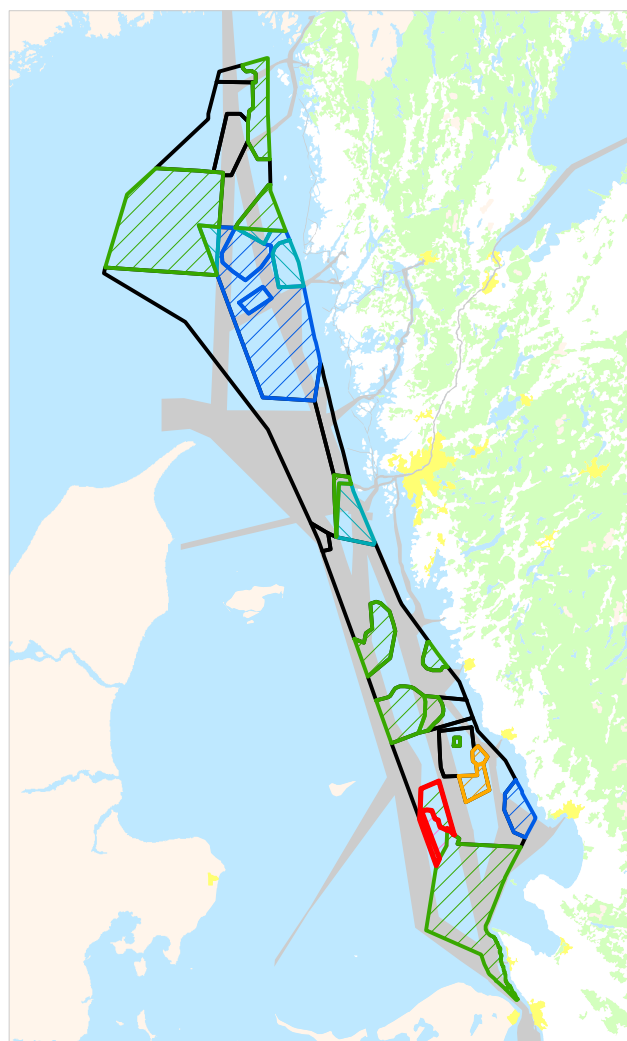
## Impacts Per Ecocomponent

| Name                    | % of Total<br>S4 | (S3)    |
|-------------------------|------------------|---------|
| Softbottom Aphotic      | 17.34            | (17.34) |
| Spawning Fish           | 15.03            | (15.03) |
| Cod                     | 13.81            | (13.81) |
| Softbottom Photic       | 12.44            | (12.44) |
| Porpoise Beltsea        | 10.2             | (10.2)  |
| Plankton Community      | 9.19             | (9.19)  |
| Harbour Seals           | 5.15             | (5.15)  |
| Seabird Winter Offshore | 4.42             | (4.42)  |
| Transportbottom Aphotic | 3.27             | (3.27)  |
| Transportbottom Photic  | 2.66             | (2.66)  |
| Eel Migration           | 2.5              | (2.5)   |
| Sprat                   | 1.93             | (1.93)  |
| Herring                 | 1.36             | (1.36)  |
| Hardbottom Photic       | 0.27             | (0.27)  |
| Seabird Winter Coastal  | 0.13             | (0.13)  |
| Birds Coastal           | 0.09             | (0.09)  |
| Artificial Reefs Total  | 0.09             | (0.09)  |
| Hardbottom Deep         | 0.09             | (0.09)  |
| Mussel Reefs Total      | 0.01             | (0.01)  |
| Haploops Reef           | 0.0              | (0.0)   |
| Rivermouth Fish         | 0.0              | (0.0)   |
| Grey Seals              | 0.0              | (0.0)   |
| Shoreline Complexity    | 0.0              | (0.0)   |
| Angiosperms             | 0.0              | (0.0)   |
| Softbottom Deep         | 0.0              | (0.0)   |
| Deep Reef               | 0.0              | (0.0)   |
| Porpoise Northsea       | 0.0              | (0.0)   |
| Hardbottom Aphotic      | 0.0              | (0.0)   |
| Transportbottom Deep    | 0.0              | (0.0)   |

Calculated with SyM

Date: 2018-03-22

Medins Havs och Vattenkonsulter AB



V301\_N

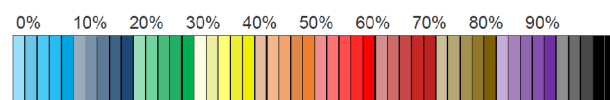
Miljöpåverkan i området jämfört med medelvärde för:

|                             |      |
|-----------------------------|------|
| S4 Västerhavet              | 73%  |
| S4 Kattegatt                | 84%  |
| S3 framtidsscenario år 2030 | 100% |

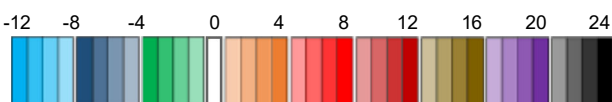
Områden och huvudanvändning



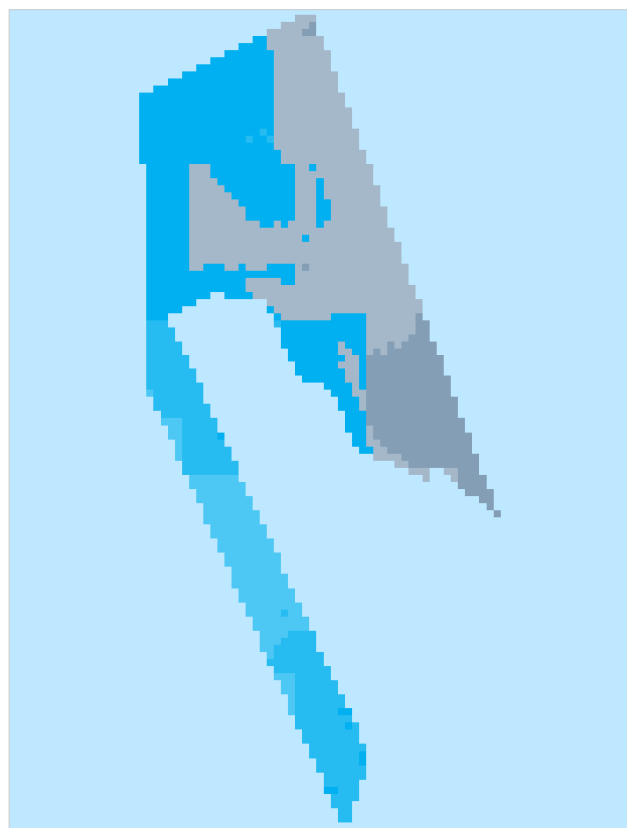
Procentuell andel av den högsta miljöpåverkan i Västerhavet, inklusive kustområden (S4)



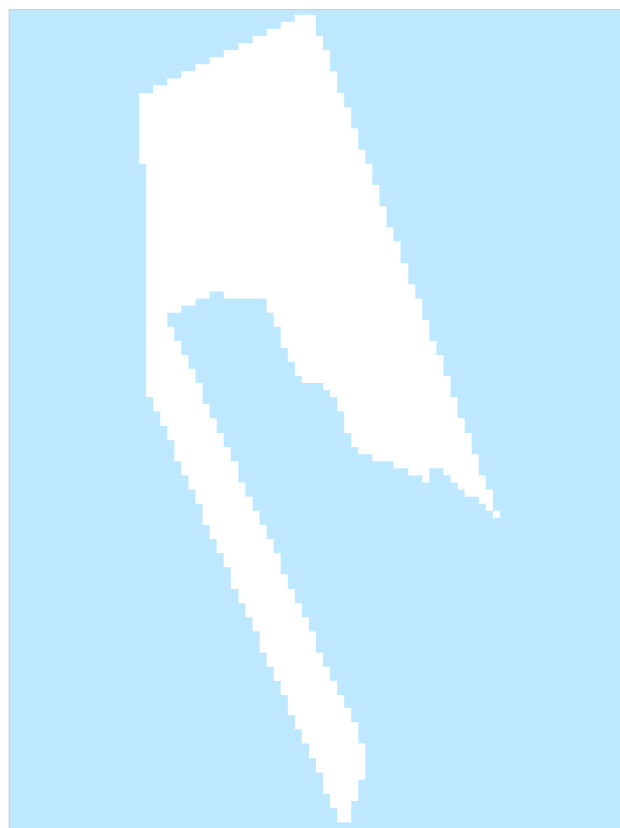
S4 plan 2030 - S3 Nollalternativ 2030.  
S4, S3 uttryckt som procentuell andel av den högsta miljöpåverkan i Västerhavet, inklusive kustområden.



S4 plan 2030



S4 plan 2030 - Nollalternativ 2030.



## Impacts Per Pressure

| Name                             | % of Total<br>S4 | (S3)    |
|----------------------------------|------------------|---------|
| Eutrophication                   |                  |         |
| Phosphorous Background           | 2.61             | (2.61)  |
| Anoxia Background                | 5.72             | (5.72)  |
| Nitrogen Background              | 24.72            | (24.72) |
| Total                            | 33.05            | (33.05) |
| General pollution                |                  |         |
| Tox Metal Background             | 3.25             | (3.25)  |
| Oilspill 2knots Wreck            | 0.0              | (0.0)   |
| Tox Synthetic Background         | 8.15             | (8.15)  |
| Tox Munition                     | 0.0              | (0.0)   |
| Tox Mine Risk                    | 0.0              | (0.0)   |
| Total                            | 11.4             | (11.4)  |
| Shipping                         |                  |         |
| Turbidity Shipping               | 0.0              | (0.0)   |
| Noise 2000Hz Shipping            | 0.0              | (0.0)   |
| Oilspill 2knots Shipping         | 2.2              | (2.2)   |
| Noise 125Hz Shipping             | 17.73            | (17.73) |
| Total                            | 19.94            | (19.94) |
| Coastal development              |                  |         |
| Tox Synthetic Treatmentplants    | 0.0              | (0.0)   |
| Habitatloss Dumping              | 0.0              | (0.0)   |
| Infrastructure                   | 0.0              | (0.0)   |
| Habitatloss Coastal Exploitation | 0.0              | (0.0)   |
| Total                            | 0.0              | (0.0)   |
| Recreational activities          |                  |         |
| Boating Pollution                | 0.0              | (0.0)   |
| Boating Noise                    | 0.0              | (0.0)   |
| Birdhunt                         | 0.0              | (0.0)   |
| Total                            | 0.0              | (0.0)   |
| Fisheries                        |                  |         |
| Abrasion Bottomtrawl             | 20.84            | (20.84) |
| Catch Gillnet                    | 0.04             | (0.04)  |
| Turbidity Bottom trawl           | 6.32             | (6.32)  |
| Catch Bottom trawl               | 8.39             | (8.39)  |
| Catch Pelagic trawl              | 0.02             | (0.02)  |
| Total                            | 35.61            | (35.61) |
| Industry                         |                  |         |
| Tox Synthetic Industry           | 0.0              | (0.0)   |
| Tox Synthetic Harbor             | 0.0              | (0.0)   |
| Total                            | 0.0              | (0.0)   |
| Mineral mining                   |                  |         |
| Turbidity Mining                 | 0.0              | (0.0)   |
| Habitat Loss Mining              | 0.0              | (0.0)   |
| Total                            | 0.0              | (0.0)   |
| Defence                          |                  |         |
| Tox Metal Military               | 0.0              | (0.0)   |
| Explosion SPL                    | 0.0              | (0.0)   |
| Explosion PM                     | 0.0              | (0.0)   |
| Total                            | 0.0              | (0.0)   |
| Aquaculture                      |                  |         |
| Habitatloss Mussel farming       | 0.0              | (0.0)   |
| Total                            | 0.0              | (0.0)   |
| Energy                           |                  |         |
| Avoidance Windpower              | 0.0              | (0.0)   |
| Noise 125Hz Windpower            | 0.0              | (0.0)   |
| EMF                              | 0.0              | (0.0)   |
| Total                            | 0.0              | (0.0)   |

V301\_N

## Cumulative Effect

|           | S4         | (S3)         |
|-----------|------------|--------------|
| Total     | 37180665.0 | (37180665.0) |
| Mean      | 17496.8    | (17496.8)    |
| Std. Dev. | 4019.2     | (4019.2)     |
| Min       | 8478.0     | (8478.0)     |
| Max       | 26234.4    | (26234.4)    |
| Area km²  | 132.64     |              |

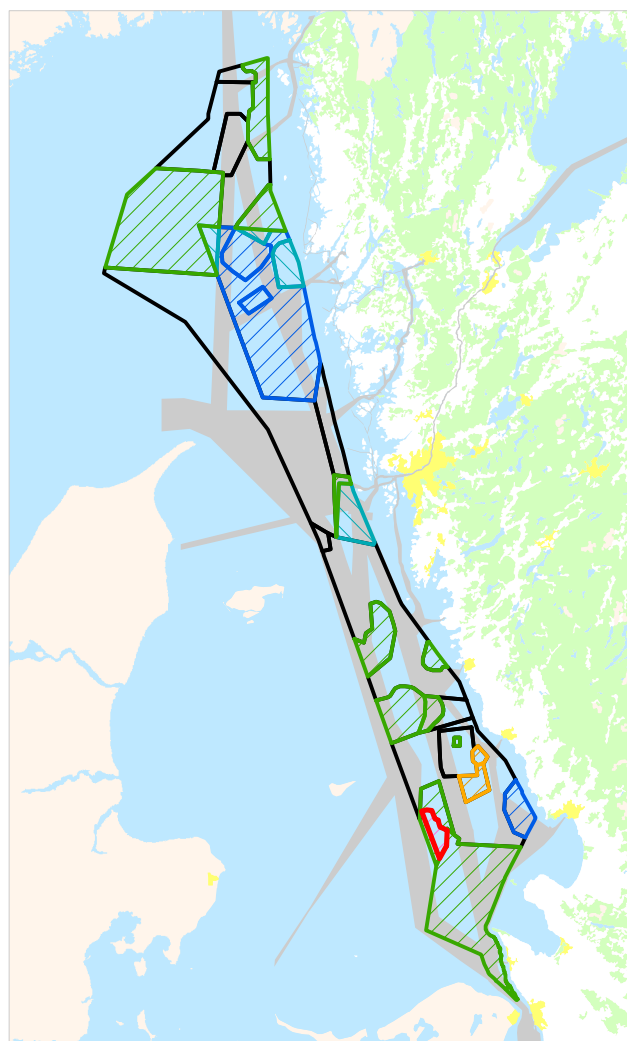
## Impacts Per Ecocomponent

| Name                    | % of Total<br>S4 | (S3)    |
|-------------------------|------------------|---------|
| Softbottom Aphotic      | 30.87            | (30.87) |
| Spawning Fish           | 15.05            | (15.05) |
| Cod                     | 14.3             | (14.3)  |
| Porpoise Beltsea        | 10.22            | (10.22) |
| Plankton Community      | 9.83             | (9.83)  |
| Transportbottom Aphotic | 5.14             | (5.14)  |
| Transportbottom Photic  | 3.95             | (3.95)  |
| Sprat                   | 2.89             | (2.89)  |
| Softbottom Photic       | 2.67             | (2.67)  |
| Harbour Seals           | 1.53             | (1.53)  |
| Seabird Winter Offshore | 1.28             | (1.28)  |
| Hardbottom Photic       | 1.08             | (1.08)  |
| Herring                 | 0.89             | (0.89)  |
| Hardbottom Deep         | 0.16             | (0.16)  |
| Mussel Reefs Total      | 0.08             | (0.08)  |
| Artificial Reefs Total  | 0.05             | (0.05)  |
| Eel Migration           | 0.01             | (0.01)  |
| Seabird Winter Coastal  | 0.0              | (0.0)   |
| Birds Coastal           | 0.0              | (0.0)   |
| Rivermouth Fish         | 0.0              | (0.0)   |
| Grey Seals              | 0.0              | (0.0)   |
| Deep Reef               | 0.0              | (0.0)   |
| Hardbottom Aphotic      | 0.0              | (0.0)   |
| Angiosperms             | 0.0              | (0.0)   |
| Shoreline Complexity    | 0.0              | (0.0)   |
| Softbottom Deep         | 0.0              | (0.0)   |
| Haploops Reef           | 0.0              | (0.0)   |
| Porpoise Northsea       | 0.0              | (0.0)   |
| Transportbottom Deep    | 0.0              | (0.0)   |

Calculated with SyM

Date: 2018-03-22

Medins Havs och Vattenkonsulter AB



V302\_ENf

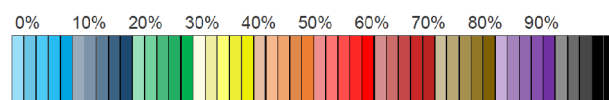
Miljöpåverkan i området jämfört med medelvärde för:

|                             |     |
|-----------------------------|-----|
| S4 Västerhavet              | 49% |
| S4 Kattegatt                | 56% |
| S3 framtidsscenario år 2030 | 84% |

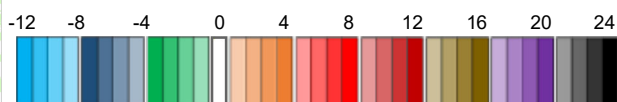
Områden och huvudanvändning



Procentuell andel av den högsta miljöpåverkan i Västerhavet, inklusive kustområden (S4)

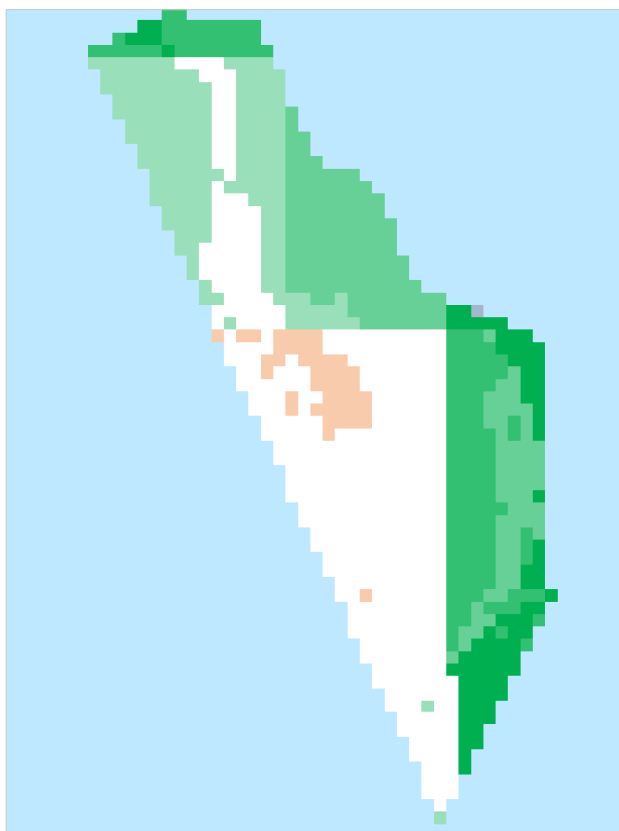
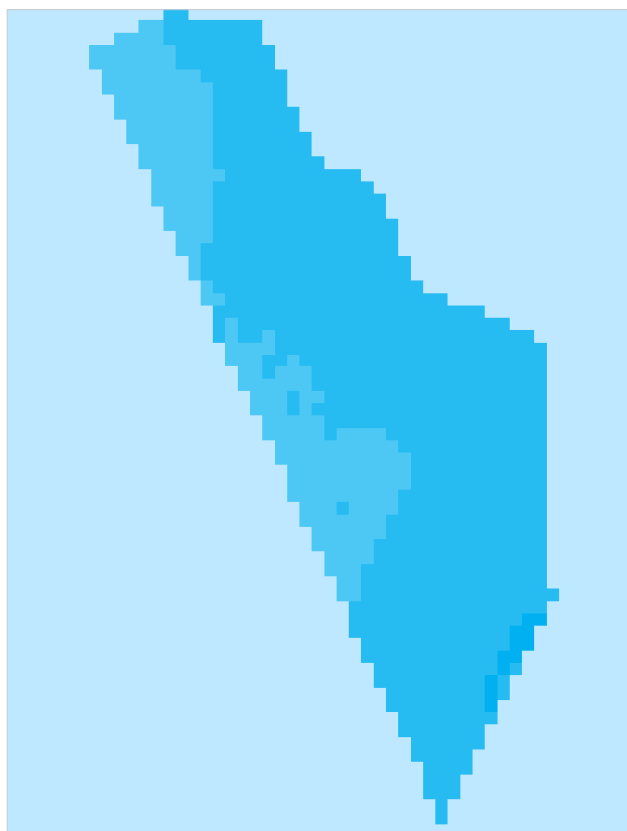


S4 plan 2030 - S3 Nollalternativ 2030.  
S4, S3 uttryckt som procentuell andel av den högsta miljöpåverkan i Västerhavet, inklusive kustområden.



S4 plan 2030

S4 plan 2030 - Nollalternativ 2030.



## Impacts Per Pressure

| Name                             | % of Total<br>S4 | (S3)    |
|----------------------------------|------------------|---------|
| Eutrophication                   |                  |         |
| Phosphorous Background           | 4.47             | (3.74)  |
| Anoxia Background                | 9.14             | (7.65)  |
| Nitrogen Background              | 37.28            | (31.21) |
| Total                            | 50.89            | (42.6)  |
| General pollution                |                  |         |
| Tox Metal Background             | 3.1              | (2.6)   |
| Oilspill 2knots Wreck            | 0.0              | (0.0)   |
| Tox Synthetic Background         | 4.21             | (3.53)  |
| Tox Munition                     | 0.0              | (0.0)   |
| Tox Mine Risk                    | 0.0              | (0.0)   |
| Total                            | 7.32             | (6.12)  |
| Shipping                         |                  |         |
| Turbidity Shipping               | 0.06             | (0.05)  |
| Noise 2000Hz Shipping            | 0.0              | (0.0)   |
| Oilspill 2knots Shipping         | 4.16             | (3.48)  |
| Noise 125Hz Shipping             | 33.71            | (28.22) |
| Total                            | 37.93            | (31.75) |
| Coastal development              |                  |         |
| Tox Synthetic Treatmentplants    | 0.0              | (0.0)   |
| Habitatloss Dumping              | 0.0              | (0.0)   |
| Infrastructure                   | 0.0              | (0.0)   |
| Habitatloss Coastal Exploitation | 0.0              | (0.0)   |
| Total                            | 0.0              | (0.0)   |
| Recreational activities          |                  |         |
| Boating Pollution                | 0.0              | (0.0)   |
| Boating Noise                    | 0.0              | (0.0)   |
| Birdhunt                         | 0.0              | (0.0)   |
| Total                            | 0.0              | (0.0)   |
| Fisheries                        |                  |         |
| Abrasion Bottomtrawl             | 0.0              | (10.77) |
| Catch Gillnet                    | 0.17             | (0.26)  |
| Turbidity Bottom trawl           | 0.0              | (3.44)  |
| Catch Bottom trawl               | 0.0              | (5.06)  |
| Catch Pelagic trawl              | 0.0              | (0.0)   |
| Total                            | 0.17             | (19.53) |
| Industry                         |                  |         |
| Tox Synthetic Industry           | 0.0              | (0.0)   |
| Tox Synthetic Harbor             | 0.0              | (0.0)   |
| Total                            | 0.0              | (0.0)   |
| Mineral mining                   |                  |         |
| Turbidity Mining                 | 0.0              | (0.0)   |
| Habitat Loss Mining              | 0.0              | (0.0)   |
| Total                            | 0.0              | (0.0)   |
| Defence                          |                  |         |
| Tox Metal Military               | 0.0              | (0.0)   |
| Explosion SPL                    | 0.0              | (0.0)   |
| Explosion PM                     | 0.0              | (0.0)   |
| Total                            | 0.0              | (0.0)   |
| Aquaculture                      |                  |         |
| Habitatloss Mussel farming       | 0.0              | (0.0)   |
| Total                            | 0.0              | (0.0)   |
| Energy                           |                  |         |
| Avoidance Windpower              | 0.65             | (0.0)   |
| Noise 125Hz Windpower            | 3.01             | (0.0)   |
| EMF                              | 0.03             | (0.0)   |
| Total                            | 3.69             | (0.0)   |

V302\_ENf

## Cumulative Effect

|           | S4         | (S3)         |
|-----------|------------|--------------|
| Total     | 12280867.2 | (14672276.2) |
| Mean      | 11696.1    | (13973.6)    |
| Std. Dev. | 1076.8     | (3310.3)     |
| Min       | 9599.4     | (9328.8)     |
| Max       | 15886.4    | (23511.7)    |
| Area km²  | 65.83      |              |

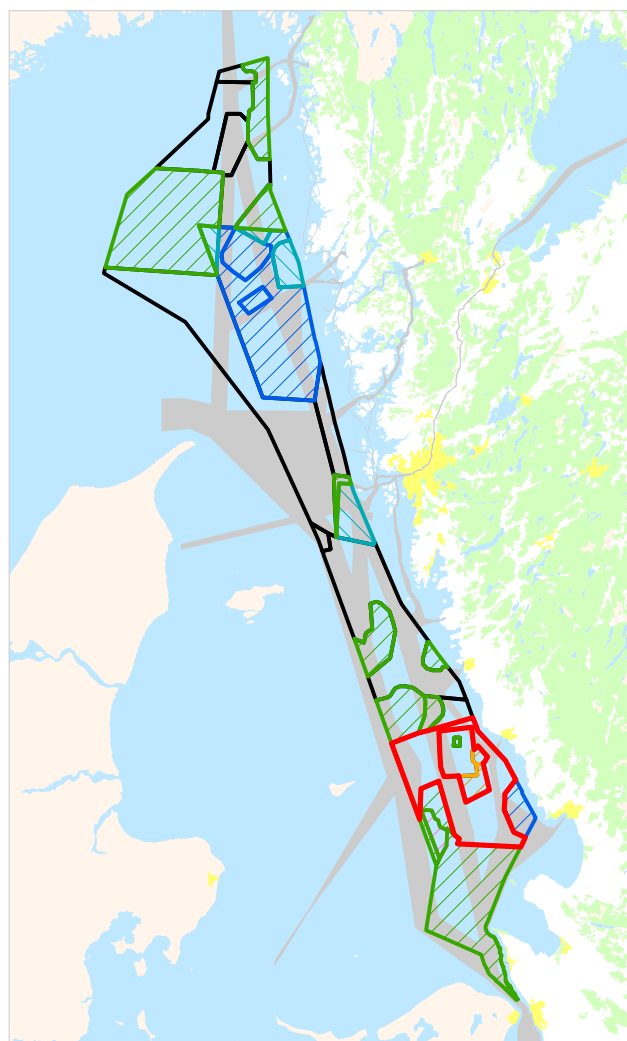
## Impacts Per Ecocomponent

| Name                    | % of Total<br>S4 | (S3)    |
|-------------------------|------------------|---------|
| Transportbottom Photic  | 21.62            | (20.22) |
| Spawning Fish           | 17.56            | (18.39) |
| Cod                     | 15.3             | (15.2)  |
| Porpoise Beltsea        | 9.63             | (9.43)  |
| Plankton Community      | 8.92             | (8.67)  |
| Softbottom Photic       | 5.95             | (6.78)  |
| Seabird Winter Offshore | 4.87             | (3.36)  |
| Hardbottom Photic       | 4.24             | (4.7)   |
| Sprat                   | 3.48             | (3.16)  |
| Softbottom Aphotic      | 3.1              | (3.89)  |
| Harbour Seals           | 3.03             | (3.34)  |
| Herring                 | 1.12             | (1.0)   |
| Transportbottom Aphotic | 1.11             | (1.73)  |
| Hardbottom Deep         | 0.06             | (0.1)   |
| Artificial Reefs Total  | 0.02             | (0.02)  |
| Seabird Winter Coastal  | 0.0              | (0.0)   |
| Birds Coastal           | 0.0              | (0.0)   |
| Eel Migration           | 0.0              | (0.0)   |
| Rivermouth Fish         | 0.0              | (0.0)   |
| Grey Seals              | 0.0              | (0.0)   |
| Shoreline Complexity    | 0.0              | (0.0)   |
| Angiosperms             | 0.0              | (0.0)   |
| Haploops Reef           | 0.0              | (0.0)   |
| Softbottom Deep         | 0.0              | (0.0)   |
| Mussel Reefs Total      | 0.0              | (0.0)   |
| Porpoise Northsea       | 0.0              | (0.0)   |
| Deep Reef               | 0.0              | (0.0)   |
| Hardbottom Aphotic      | 0.0              | (0.0)   |
| Transportbottom Deep    | 0.0              | (0.0)   |

Calculated with SyM

Date: 2018-03-22

Medins Havs och Vattenkonsulter AB



V303\_G

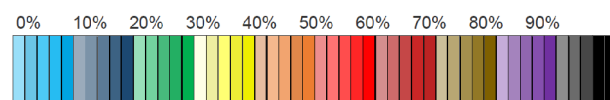
Miljöpåverkan i området jämfört med medelvärde för:

|                             |      |
|-----------------------------|------|
| S4 Västerhavet              | 81%  |
| S4 Kattegatt                | 93%  |
| S3 framtidsscenario år 2030 | 102% |

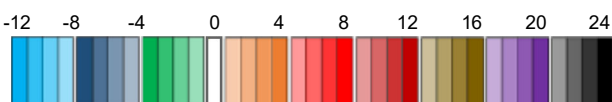
Områden och huvudanvändning



Procentuell andel av den högsta miljöpåverkan i Västerhavet, inklusive kustområden (S4)

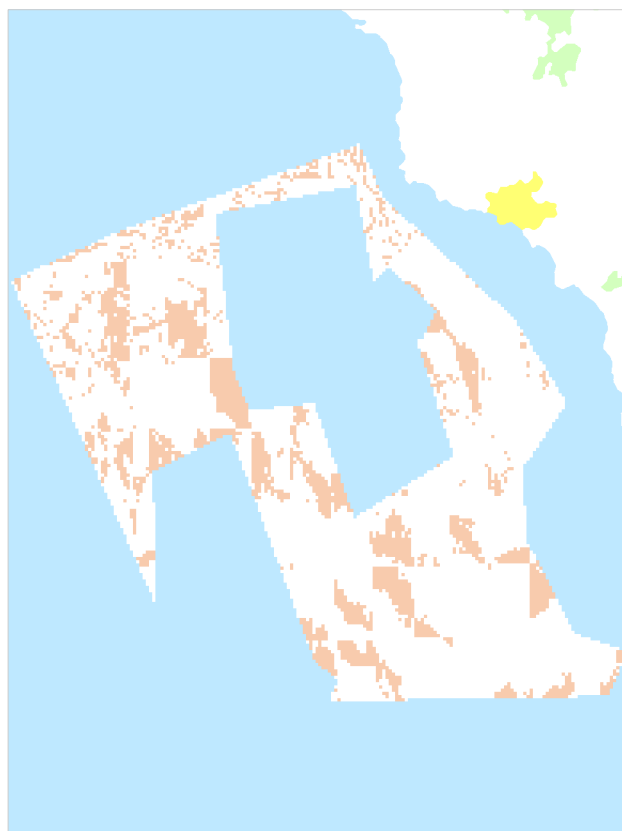
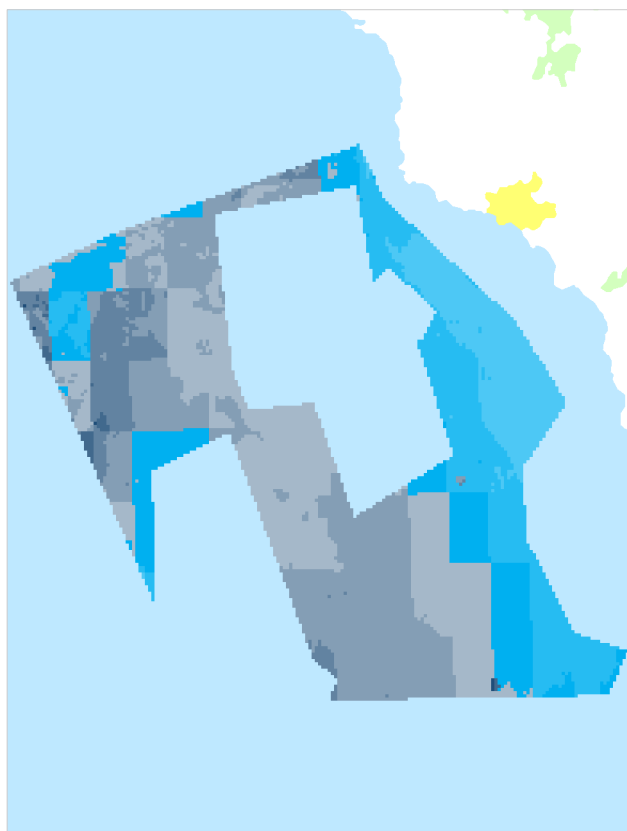


S4 plan 2030 - S3 Nollalternativ 2030.  
S4, S3 uttryckt som procentuell andel av den högsta miljöpåverkan i Västerhavet, inklusive kustområden.



S4 plan 2030

S4 plan 2030 - Nollalternativ 2030.



## Impacts Per Pressure

| Name                             | % of Total<br>S4 | (S3)    |
|----------------------------------|------------------|---------|
| Eutrophication                   |                  |         |
| Phosphorous Background           | 2.72             | (2.78)  |
| Anoxia Background                | 4.94             | (5.05)  |
| Nitrogen Background              | 24.41            | (24.92) |
| Total                            | 32.07            | (32.75) |
| General pollution                |                  |         |
| Tox Metal Background             | 5.47             | (5.59)  |
| Oilspill 2knots Wreck            | 0.41             | (0.42)  |
| Tox Synthetic Background         | 8.35             | (8.52)  |
| Tox Munition                     | 0.0              | (0.0)   |
| Tox Mine Risk                    | 0.0              | (0.0)   |
| Total                            | 14.23            | (14.53) |
| Shipping                         |                  |         |
| Turbidity Shipping               | 0.01             | (0.01)  |
| Noise 2000Hz Shipping            | 0.01             | (0.01)  |
| Oilspill 2knots Shipping         | 1.62             | (1.65)  |
| Noise 125Hz Shipping             | 14.03            | (14.32) |
| Total                            | 15.66            | (15.99) |
| Coastal development              |                  |         |
| Tox Synthetic Treatmentplants    | 0.0              | (0.0)   |
| Habitatloss Dumping              | 0.09             | (0.09)  |
| Infrastructure                   | 0.0              | (0.0)   |
| Habitatloss Coastal Exploitation | 0.0              | (0.0)   |
| Total                            | 0.09             | (0.09)  |
| Recreational activities          |                  |         |
| Boating Pollution                | 0.0              | (0.0)   |
| Boating Noise                    | 0.0              | (0.0)   |
| Birdhunt                         | 0.14             | (0.15)  |
| Total                            | 0.15             | (0.15)  |
| Fisheries                        |                  |         |
| Abrasion Bottomtrawl             | 21.13            | (20.36) |
| Catch Gillnet                    | 0.05             | (0.05)  |
| Turbidity Bottom trawl           | 7.42             | (7.17)  |
| Catch Bottom trawl               | 9.18             | (8.89)  |
| Catch Pelagic trawl              | 0.02             | (0.02)  |
| Total                            | 37.8             | (36.49) |
| Industry                         |                  |         |
| Tox Synthetic Industry           | 0.0              | (0.0)   |
| Tox Synthetic Harbor             | 0.0              | (0.0)   |
| Total                            | 0.0              | (0.0)   |
| Mineral mining                   |                  |         |
| Turbidity Mining                 | 0.0              | (0.0)   |
| Habitat Loss Mining              | 0.0              | (0.0)   |
| Total                            | 0.0              | (0.0)   |
| Defence                          |                  |         |
| Tox Metal Military               | 0.0              | (0.0)   |
| Explosion SPL                    | 0.0              | (0.0)   |
| Explosion PM                     | 0.0              | (0.0)   |
| Total                            | 0.0              | (0.0)   |
| Aquaculture                      |                  |         |
| Habitatloss Mussel farming       | 0.0              | (0.0)   |
| Total                            | 0.0              | (0.0)   |
| Energy                           |                  |         |
| Avoidance Windpower              | 0.0              | (0.0)   |
| Noise 125Hz Windpower            | 0.0              | (0.0)   |
| EMF                              | 0.0              | (0.0)   |
| Total                            | 0.0              | (0.0)   |

V303\_G

## Cumulative Effect

|           | S4          | (S3)          |
|-----------|-------------|---------------|
| Total     | 265833203.2 | (260357948.8) |
| Mean      | 19418.1     | (19018.1)     |
| Std. Dev. | 5565.6      | (5539.3)      |
| Min       | 8940.2      | (8645.1)      |
| Max       | 35756.3     | (35332.9)     |
| Area km²  | 855.5       |               |

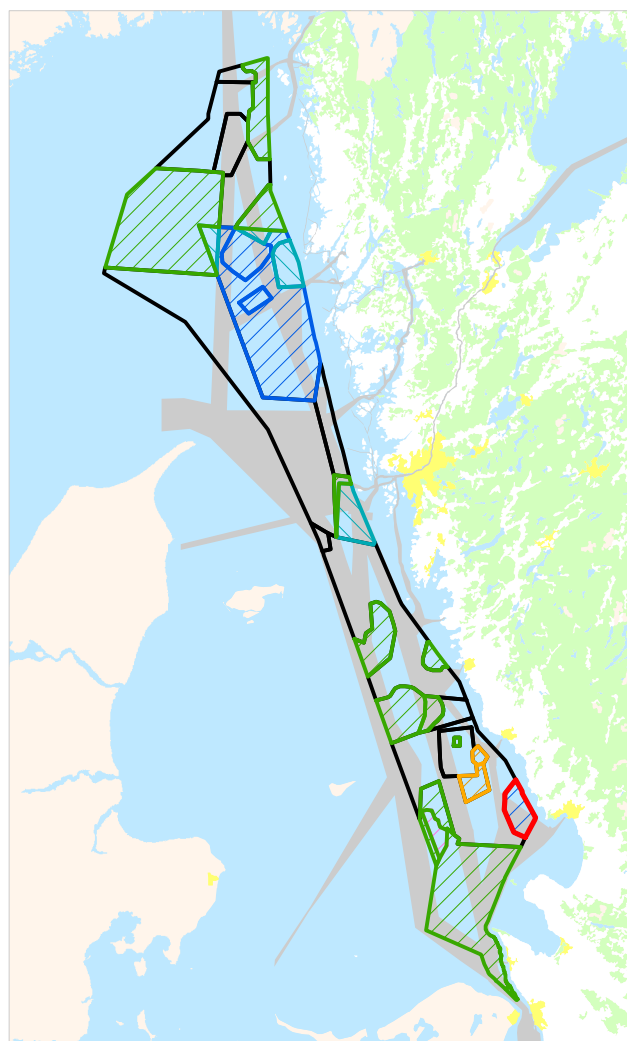
## Impacts Per Ecocomponent

| Name                    | % of Total<br>S4 | (S3)    |
|-------------------------|------------------|---------|
| Softbottom Aphotic      | 28.64            | (28.62) |
| Spawning Fish           | 15.97            | (15.98) |
| Cod                     | 12.82            | (12.83) |
| Plankton Community      | 9.53             | (9.61)  |
| Softbottom Photic       | 9.17             | (9.04)  |
| Porpoise Beltsea        | 8.15             | (8.18)  |
| Sprat                   | 3.13             | (3.15)  |
| Harbour Seals           | 2.56             | (2.54)  |
| Seabird Winter Offshore | 2.39             | (2.44)  |
| Transportbottom Aphotic | 2.08             | (2.07)  |
| Transportbottom Photic  | 2.03             | (2.02)  |
| Eel Migration           | 1.12             | (1.13)  |
| Herring                 | 1.02             | (1.03)  |
| Hardbottom Photic       | 0.51             | (0.5)   |
| Porpoise Northsea       | 0.37             | (0.37)  |
| Birds Coastal           | 0.21             | (0.21)  |
| Hardbottom Deep         | 0.15             | (0.15)  |
| Softbottom Deep         | 0.07             | (0.07)  |
| Artificial Reefs Total  | 0.05             | (0.05)  |
| Mussel Reefs Total      | 0.01             | (0.01)  |
| Seabird Winter Coastal  | 0.0              | (0.0)   |
| Transportbottom Deep    | 0.0              | (0.0)   |
| Haploops Reef           | 0.0              | (0.0)   |
| Hardbottom Aphotic      | 0.0              | (0.0)   |
| Deep Reef               | 0.0              | (0.0)   |
| Grey Seals              | 0.0              | (0.0)   |
| Rivermouth Fish         | 0.0              | (0.0)   |
| Shoreline Complexity    | 0.0              | (0.0)   |
| Angiosperms             | 0.0              | (0.0)   |

Calculated with SyM

Date: 2018-03-22

Medins Havs och Vattenkonsulter AB



V304\_F

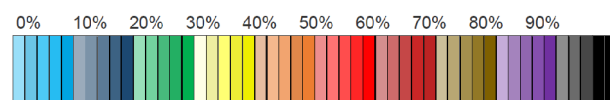
Miljöpåverkan i området jämfört med medelvärde för:

|                             |      |
|-----------------------------|------|
| S4 Västerhavet              | 51%  |
| S4 Kattegatt                | 59%  |
| S3 framtidsscenario år 2030 | 103% |

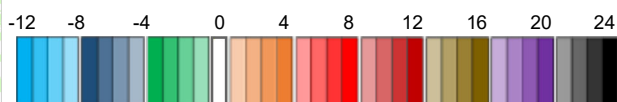
Områden och huvudanvändning



Procentuell andel av den högsta miljöpåverkan i Västerhavet, inklusive kustområden (S4)

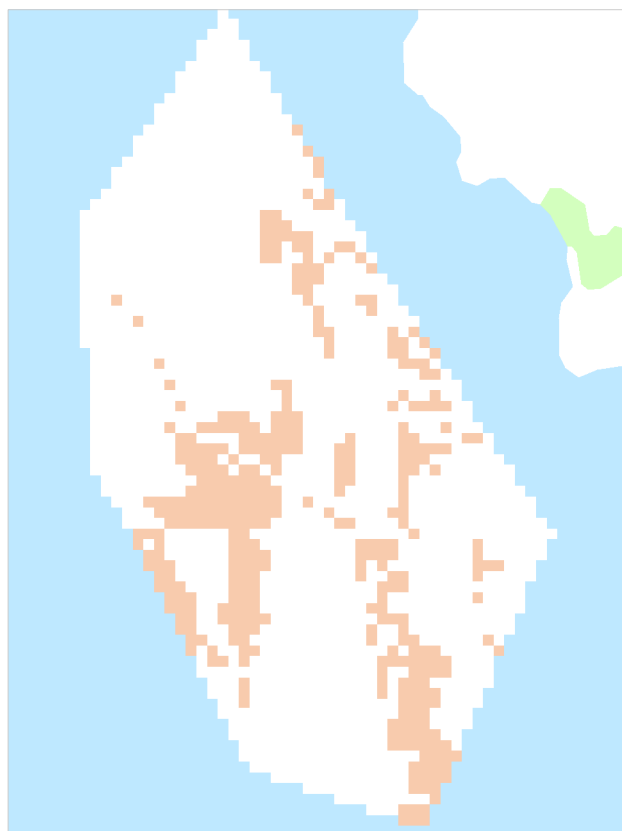
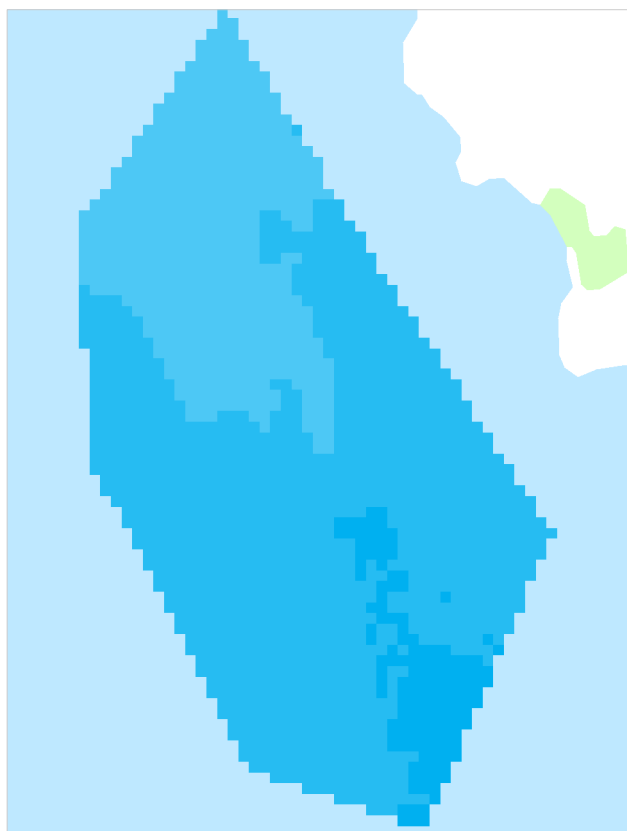


S4 plan 2030 - S3 Nollalternativ 2030.  
S4, S3 uttryckt som procentuell andel av den högsta miljöpåverkan i Västerhavet, inklusive kustområden.



S4 plan 2030

S4 plan 2030 - Nollalternativ 2030.



## Impacts Per Pressure

| Name                             | % of Total<br>S4 | (S3)    |
|----------------------------------|------------------|---------|
| Eutrophication                   |                  |         |
| Phosphorous Background           | 4.63             | (4.76)  |
| Anoxia Background                | 10.11            | (10.42) |
| Nitrogen Background              | 37.49            | (38.61) |
| Total                            | 52.23            | (53.79) |
| General pollution                |                  |         |
| Tox Metal Background             | 7.75             | (7.99)  |
| Oilspill 2knots Wreck            | 0.0              | (0.0)   |
| Tox Synthetic Background         | 7.63             | (7.85)  |
| Tox Munition                     | 0.0              | (0.0)   |
| Tox Mine Risk                    | 0.0              | (0.0)   |
| Total                            | 15.38            | (15.84) |
| Shipping                         |                  |         |
| Turbidity Shipping               | 0.0              | (0.0)   |
| Noise 2000Hz Shipping            | 0.0              | (0.0)   |
| Oilspill 2knots Shipping         | 1.91             | (1.97)  |
| Noise 125Hz Shipping             | 22.46            | (23.13) |
| Total                            | 24.37            | (25.1)  |
| Coastal development              |                  |         |
| Tox Synthetic Treatmentplants    | 0.0              | (0.0)   |
| Habitatloss Dumping              | 0.0              | (0.0)   |
| Infrastructure                   | 0.0              | (0.0)   |
| Habitatloss Coastal Exploitation | 0.0              | (0.0)   |
| Total                            | 0.0              | (0.0)   |
| Recreational activities          |                  |         |
| Boating Pollution                | 0.0              | (0.0)   |
| Boating Noise                    | 0.0              | (0.0)   |
| Birdhunt                         | 0.42             | (0.43)  |
| Total                            | 0.42             | (0.43)  |
| Fisheries                        |                  |         |
| Abrasion Bottomtrawl             | 1.79             | (0.2)   |
| Catch Gillnet                    | 1.69             | (1.74)  |
| Turbidity Bottom trawl           | 0.73             | (0.08)  |
| Catch Bottom trawl               | 0.72             | (0.08)  |
| Catch Pelagic trawl              | 0.0              | (0.0)   |
| Total                            | 4.93             | (2.1)   |
| Industry                         |                  |         |
| Tox Synthetic Industry           | 0.0              | (0.0)   |
| Tox Synthetic Harbor             | 0.0              | (0.0)   |
| Total                            | 0.0              | (0.0)   |
| Mineral mining                   |                  |         |
| Turbidity Mining                 | 0.0              | (0.0)   |
| Habitat Loss Mining              | 0.0              | (0.0)   |
| Total                            | 0.0              | (0.0)   |
| Defence                          |                  |         |
| Tox Metal Military               | 2.67             | (2.75)  |
| Explosion SPL                    | 0.0              | (0.0)   |
| Explosion PM                     | 0.0              | (0.0)   |
| Total                            | 2.67             | (2.75)  |
| Aquaculture                      |                  |         |
| Habitatloss Musselselfarming     | 0.0              | (0.0)   |
| Total                            | 0.0              | (0.0)   |
| Energy                           |                  |         |
| Avoidance Windpower              | 0.0              | (0.0)   |
| Noise 125Hz Windpower            | 0.0              | (0.0)   |
| EMF                              | 0.0              | (0.0)   |
| Total                            | 0.0              | (0.0)   |

V304\_F

## Cumulative Effect

|           | S4         | (S3)         |
|-----------|------------|--------------|
| Total     | 24256309.4 | (23553698.9) |
| Mean      | 12312.8    | (11956.2)    |
| Std. Dev. | 1753.7     | (1710.7)     |
| Min       | 8599.5     | (8297.0)     |
| Max       | 17981.1    | (17355.3)    |
| Area km²  | 123.27     |              |

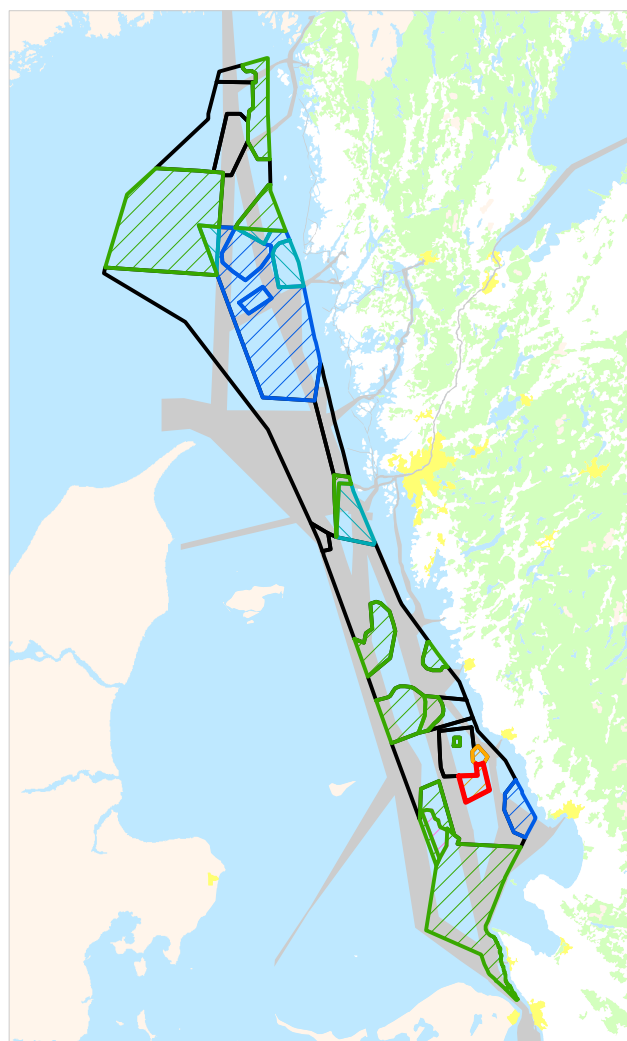
## Impacts Per Ecosystem

| Name                    | % of Total<br>S4 | (S3)    |
|-------------------------|------------------|---------|
| Softbottom Photic       | 25.36            | (25.03) |
| Spawning Fish           | 14.93            | (14.9)  |
| Cod                     | 13.36            | (13.34) |
| Transportbottom Photic  | 10.76            | (10.84) |
| Plankton Community      | 10.34            | (10.47) |
| Seabird Winter Offshore | 7.52             | (7.74)  |
| Eel Migration           | 4.86             | (4.91)  |
| Harbour Seals           | 4.64             | (4.55)  |
| Porpoise Beltsea        | 2.95             | (2.97)  |
| Sprat                   | 2.58             | (2.59)  |
| Hardbottom Photic       | 1.71             | (1.67)  |
| Herring                 | 0.92             | (0.93)  |
| Birds Coastal           | 0.05             | (0.05)  |
| Artificial Reefs Total  | 0.01             | (0.01)  |
| Mussel Reefs Total      | 0.01             | (0.01)  |
| Deep Reef               | 0.0              | (0.0)   |
| Seabird Winter Coastal  | 0.0              | (0.0)   |
| Grey Seals              | 0.0              | (0.0)   |
| Rivermouth Fish         | 0.0              | (0.0)   |
| Angiosperms             | 0.0              | (0.0)   |
| Hardbottom Aphotic      | 0.0              | (0.0)   |
| Shoreline Complexity    | 0.0              | (0.0)   |
| Softbottom Deep         | 0.0              | (0.0)   |
| Softbottom Aphotic      | 0.0              | (0.0)   |
| Haploops Reef           | 0.0              | (0.0)   |
| Porpoise Northsea       | 0.0              | (0.0)   |
| Transportbottom Aphotic | 0.0              | (0.0)   |
| Hardbottom Deep         | 0.0              | (0.0)   |
| Transportbottom Deep    | 0.0              | (0.0)   |

Calculated with SyM

Date: 2018-03-22

Medins Havs och Vattenkonsulter AB



V305\_Efn

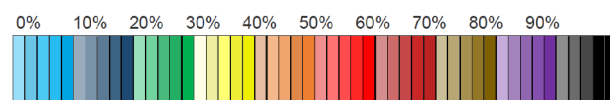
Miljöpåverkan i området jämfört med medelvärde för:

|                             |     |
|-----------------------------|-----|
| S4 Västerhavet              | 49% |
| S4 Kattegatt                | 56% |
| S3 framtidsscenario år 2030 | 62% |

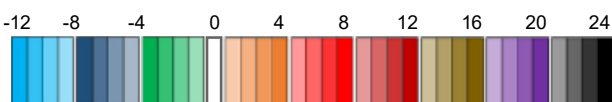
Områden och huvudanvändning



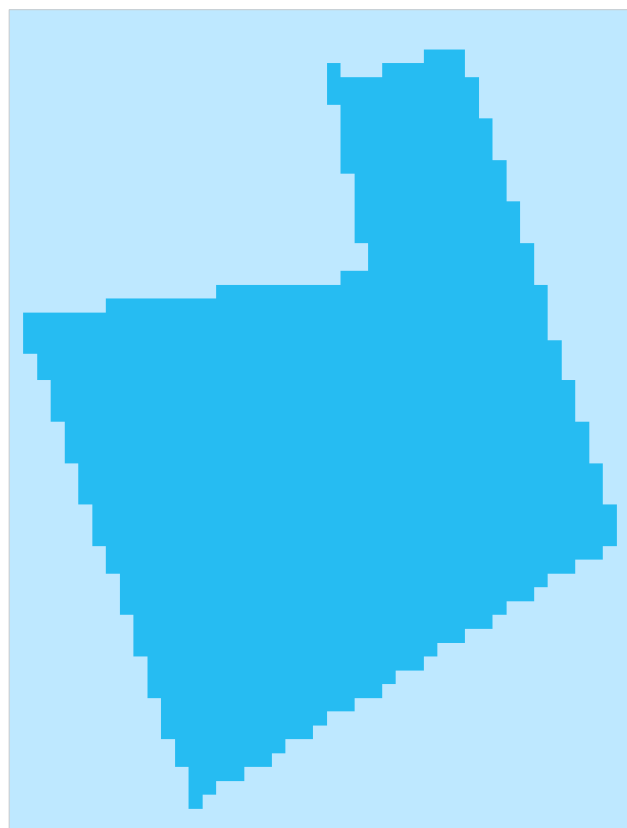
Procentuell andel av den högsta miljöpåverkan i Västerhavet, inklusive kustområden (S4)



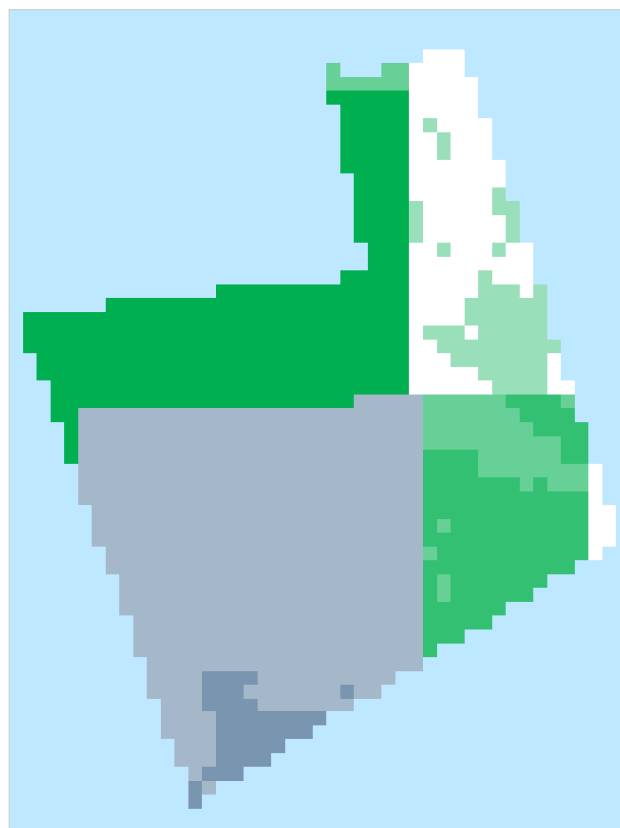
S4 plan 2030 - S3 Nollalternativ 2030.  
S4, S3 uttryckt som procentuell andel av den högsta miljöpåverkan i Västerhavet, inklusive kustområden.



S4 plan 2030



S4 plan 2030 - Nollalternativ 2030.



## Impacts Per Pressure

| Name                             | % of Total<br>S4 | (S3)    |
|----------------------------------|------------------|---------|
| Eutrophication                   |                  |         |
| Phosphorous Background           | 4.46             | (2.76)  |
| Anoxia Background                | 6.03             | (3.73)  |
| Nitrogen Background              | 42.56            | (26.33) |
| Total                            | 53.05            | (32.82) |
| General pollution                |                  |         |
| Tox Metal Background             | 10.58            | (6.54)  |
| Oilspill 2knots Wreck            | 0.0              | (0.0)   |
| Tox Synthetic Background         | 14.85            | (9.19)  |
| Tox Munition                     | 0.0              | (0.0)   |
| Tox Mine Risk                    | 0.0              | (0.0)   |
| Total                            | 25.43            | (15.73) |
| Shipping                         |                  |         |
| Turbidity Shipping               | 0.0              | (0.0)   |
| Noise 2000Hz Shipping            | 0.0              | (0.0)   |
| Oilspill 2knots Shipping         | 1.95             | (1.2)   |
| Noise 125Hz Shipping             | 15.29            | (9.46)  |
| Total                            | 17.24            | (10.66) |
| Coastal development              |                  |         |
| Tox Synthetic Treatmentplants    | 0.0              | (0.0)   |
| Habitatloss Dumping              | 0.0              | (0.0)   |
| Infrastructure                   | 0.0              | (0.0)   |
| Habitatloss Coastal Exploitation | 0.0              | (0.0)   |
| Total                            | 0.0              | (0.0)   |
| Recreational activities          |                  |         |
| Boating Pollution                | 0.0              | (0.0)   |
| Boating Noise                    | 0.0              | (0.0)   |
| Birdhunt                         | 0.0              | (0.16)  |
| Total                            | 0.0              | (0.16)  |
| Fisheries                        |                  |         |
| Abrasion Bottomtrawl             | 0.0              | (23.14) |
| Catch Gillnet                    | 0.0              | (0.0)   |
| Turbidity Bottom trawl           | 0.0              | (7.84)  |
| Catch Bottom trawl               | 0.0              | (9.59)  |
| Catch Pelagic trawl              | 0.0              | (0.05)  |
| Total                            | 0.0              | (40.62) |
| Industry                         |                  |         |
| Tox Synthetic Industry           | 0.0              | (0.0)   |
| Tox Synthetic Harbor             | 0.0              | (0.0)   |
| Total                            | 0.0              | (0.0)   |
| Mineral mining                   |                  |         |
| Turbidity Mining                 | 0.0              | (0.0)   |
| Habitat Loss Mining              | 0.0              | (0.0)   |
| Total                            | 0.0              | (0.0)   |
| Defence                          |                  |         |
| Tox Metal Military               | 0.0              | (0.0)   |
| Explosion SPL                    | 0.0              | (0.0)   |
| Explosion PM                     | 0.0              | (0.0)   |
| Total                            | 0.0              | (0.0)   |
| Aquaculture                      |                  |         |
| Habitatloss Mussel farming       | 0.0              | (0.0)   |
| Total                            | 0.0              | (0.0)   |
| Energy                           |                  |         |
| Avoidance Windpower              | 0.9              | (0.0)   |
| Noise 125Hz Windpower            | 3.34             | (0.0)   |
| EMF                              | 0.05             | (0.0)   |
| Total                            | 4.28             | (0.0)   |

V305\_Efn

## Cumulative Effect

|           | S4         | (S3)         |
|-----------|------------|--------------|
| Total     | 14457965.2 | (23368739.0) |
| Mean      | 11744.9    | (18983.5)    |
| Std. Dev. | 334.2      | (3418.1)     |
| Min       | 10923.4    | (11150.1)    |
| Max       | 14483.9    | (24992.9)    |
| Area km²  | 76.87      |              |

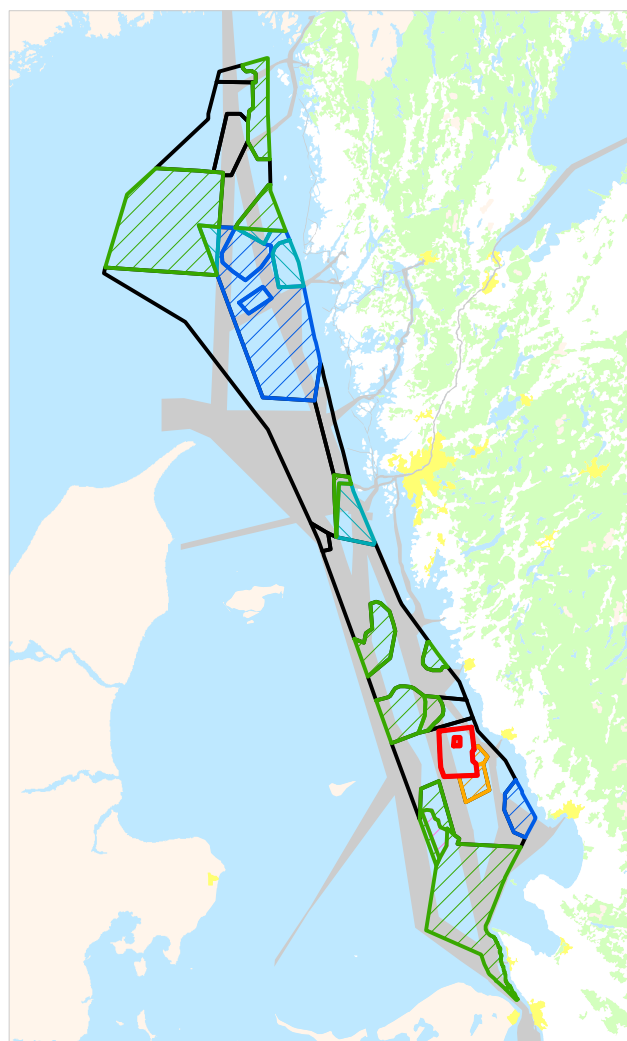
## Impacts Per Ecocomponent

| Name                    | % of Total<br>S4 | (S3)    |
|-------------------------|------------------|---------|
| Softbottom Aphotic      | 22.18            | (29.18) |
| Spawning Fish           | 17.84            | (17.88) |
| Softbottom Photoc       | 13.77            | (12.76) |
| Plankton Community      | 12.09            | (9.79)  |
| Cod                     | 11.62            | (11.71) |
| Porpoise Beltsea        | 9.77             | (8.73)  |
| Seabird Winter Offshore | 5.01             | (2.53)  |
| Sprat                   | 2.36             | (2.12)  |
| Eel Migration           | 2.01             | (1.52)  |
| Harbour Seals           | 1.18             | (1.41)  |
| Herring                 | 0.86             | (0.69)  |
| Transportbottom Aphotic | 0.59             | (1.1)   |
| Transportbottom Photoc  | 0.57             | (0.42)  |
| Hardbottom Photoc       | 0.13             | (0.13)  |
| Artificial Reefs Total  | 0.03             | (0.02)  |
| Hardbottom Deep         | 0.0              | (0.0)   |
| Seabird Winter Coastal  | 0.0              | (0.0)   |
| Birds Coastal           | 0.0              | (0.0)   |
| Rivermouth Fish         | 0.0              | (0.0)   |
| Grey Seals              | 0.0              | (0.0)   |
| Shoreline Complexity    | 0.0              | (0.0)   |
| Angiosperms             | 0.0              | (0.0)   |
| Haploops Reef           | 0.0              | (0.0)   |
| Softbottom Deep         | 0.0              | (0.0)   |
| Mussel Reefs Total      | 0.0              | (0.0)   |
| Deep Reef               | 0.0              | (0.0)   |
| Porpoise Northsea       | 0.0              | (0.0)   |
| Hardbottom Aphotic      | 0.0              | (0.0)   |
| Transportbottom Deep    | 0.0              | (0.0)   |

Calculated with SyM

Date: 2018-03-22

Medins Havs och Vattenkonsulter AB



V306\_Gn

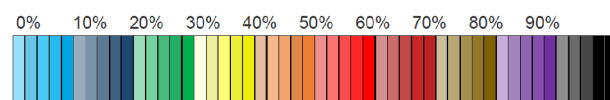
Miljöpåverkan i området jämfört med medelvärde för:

|                             |     |
|-----------------------------|-----|
| S4 Västerhavet              | 81% |
| S4 Kattegatt                | 93% |
| S3 framtidsscenario år 2030 | 95% |

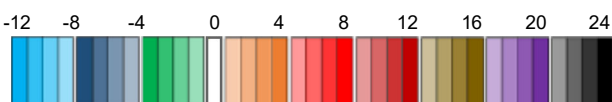
Områden och huvudanvändning



Procentuell andel av den högsta miljöpåverkan i Västerhavet, inklusive kustområden (S4)

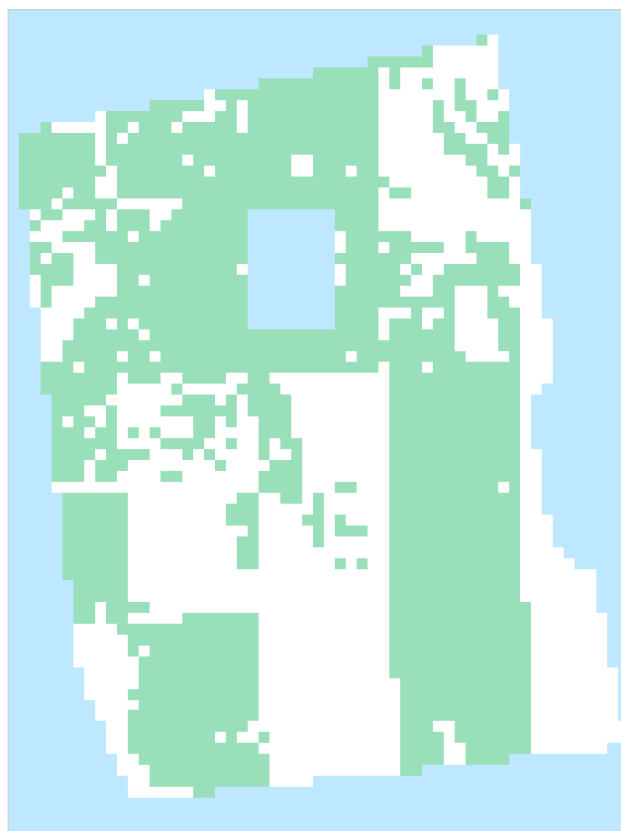
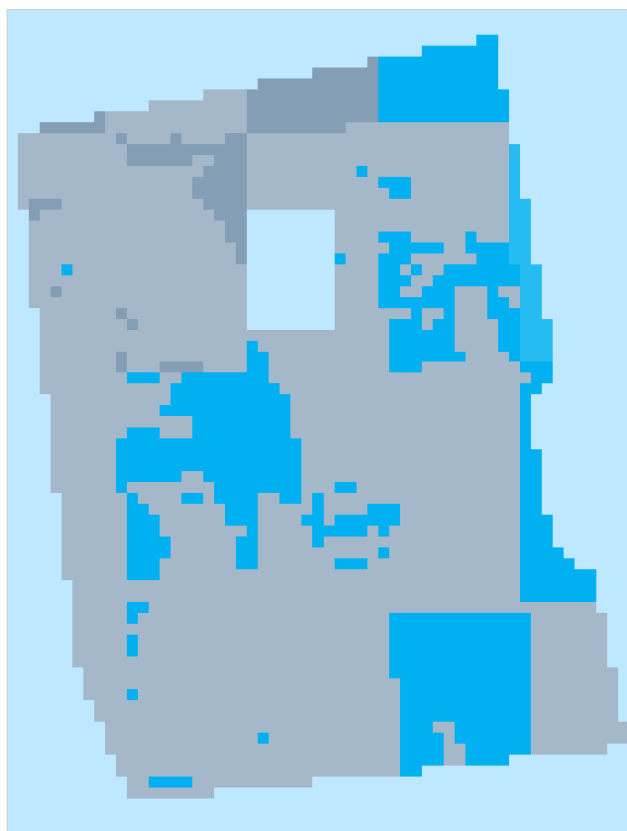


S4 plan 2030 - S3 Nollalternativ 2030.  
S4, S3 uttryckt som procentuell andel av den högsta miljöpåverkan i Västerhavet, inklusive kustområden.



S4 plan 2030

S4 plan 2030 - Nollalternativ 2030.



## Impacts Per Pressure

| Name                             | % of Total<br>S4 | (S3)    |
|----------------------------------|------------------|---------|
| Eutrophication                   |                  |         |
| Phosphorous Background           | 2.65             | (2.52)  |
| Anoxia Background                | 3.34             | (3.17)  |
| Nitrogen Background              | 24.73            | (23.48) |
| Total                            | 30.73            | (29.17) |
| General pollution                |                  |         |
| Tox Metal Background             | 4.0              | (3.8)   |
| Oilspill 2knots Wreck            | 0.0              | (0.0)   |
| Tox Synthetic Background         | 8.97             | (8.52)  |
| Tox Munition                     | 0.0              | (0.0)   |
| Tox Mine Risk                    | 0.0              | (0.0)   |
| Total                            | 12.97            | (12.31) |
| Shipping                         |                  |         |
| Turbidity Shipping               | 0.0              | (0.0)   |
| Noise 2000Hz Shipping            | 0.0              | (0.0)   |
| Oilspill 2knots Shipping         | 1.38             | (1.31)  |
| Noise 125Hz Shipping             | 11.06            | (10.5)  |
| Total                            | 12.44            | (11.81) |
| Coastal development              |                  |         |
| Tox Synthetic Treatmentplants    | 0.0              | (0.0)   |
| Habitatloss Dumping              | 0.0              | (0.0)   |
| Infrastructure                   | 0.0              | (0.0)   |
| Habitatloss Coastal Exploitation | 0.0              | (0.0)   |
| Total                            | 0.0              | (0.0)   |
| Recreational activities          |                  |         |
| Boating Pollution                | 0.0              | (0.0)   |
| Boating Noise                    | 0.0              | (0.0)   |
| Birdhunt                         | 0.09             | (0.08)  |
| Total                            | 0.09             | (0.08)  |
| Fisheries                        |                  |         |
| Abrasion Bottomtrawl             | 27.38            | (26.06) |
| Catch Gillnet                    | 0.02             | (0.03)  |
| Turbidity Bottom trawl           | 9.67             | (9.2)   |
| Catch Bottom trawl               | 6.7              | (11.33) |
| Catch Pelagic trawl              | 0.0              | (0.01)  |
| Total                            | 43.77            | (46.62) |
| Industry                         |                  |         |
| Tox Synthetic Industry           | 0.0              | (0.0)   |
| Tox Synthetic Harbor             | 0.0              | (0.0)   |
| Total                            | 0.0              | (0.0)   |
| Mineral mining                   |                  |         |
| Turbidity Mining                 | 0.0              | (0.0)   |
| Habitat Loss Mining              | 0.0              | (0.0)   |
| Total                            | 0.0              | (0.0)   |
| Defence                          |                  |         |
| Tox Metal Military               | 0.0              | (0.0)   |
| Explosion SPL                    | 0.0              | (0.0)   |
| Explosion PM                     | 0.0              | (0.0)   |
| Total                            | 0.0              | (0.0)   |
| Aquaculture                      |                  |         |
| Habitatloss Mussel farming       | 0.0              | (0.0)   |
| Total                            | 0.0              | (0.0)   |
| Energy                           |                  |         |
| Avoidance Windpower              | 0.0              | (0.0)   |
| Noise 125Hz Windpower            | 0.0              | (0.0)   |
| EMF                              | 0.0              | (0.0)   |
| Total                            | 0.0              | (0.0)   |

V306\_Gn

## Cumulative Effect

|           | S4         | (S3)         |
|-----------|------------|--------------|
| Total     | 55473900.0 | (58440779.5) |
| Mean      | 19423.6    | (20462.5)    |
| Std. Dev. | 1837.6     | (2099.8)     |
| Min       | 11002.3    | (11068.6)    |
| Max       | 23919.5    | (25614.1)    |
| Area km²  | 178.24     |              |

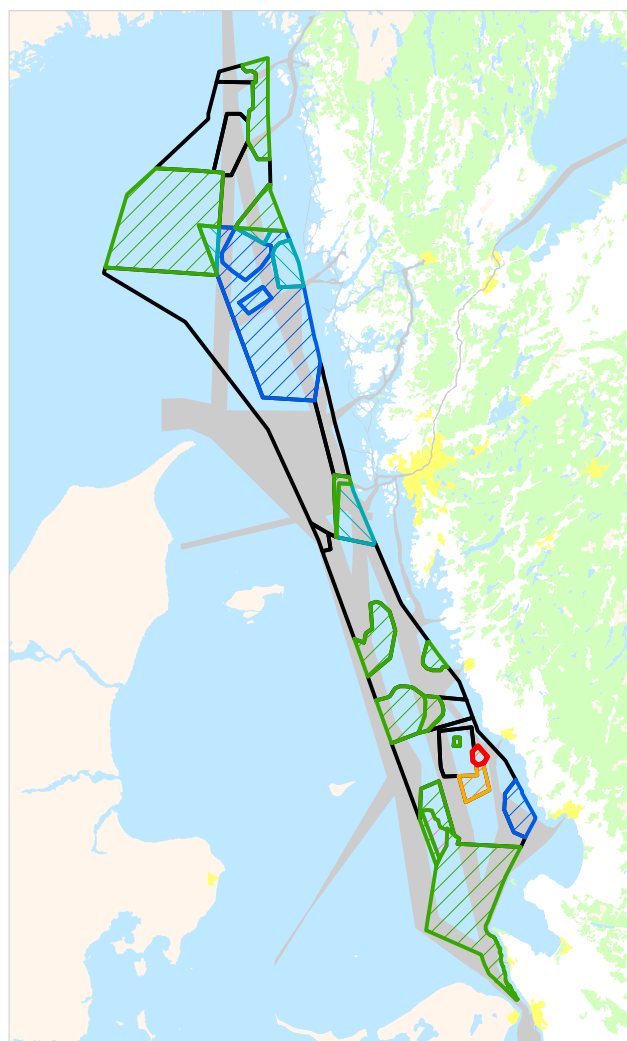
## Impacts Per Ecocomponent

| Name                    | % of Total<br>S4 | (S3)    |
|-------------------------|------------------|---------|
| Softbottom Aphotic      | 34.52            | (34.55) |
| Spawning Fish           | 15.53            | (16.22) |
| Cod                     | 12.7             | (12.07) |
| Plankton Community      | 10.07            | (9.57)  |
| Porpoise Beltsea        | 9.25             | (9.72)  |
| Softbottom Photic       | 6.23             | (6.18)  |
| Transportbottom Aphotic | 2.36             | (2.42)  |
| Sprat                   | 2.1              | (2.23)  |
| Eel Migration           | 1.99             | (1.89)  |
| Harbour Seals           | 1.7              | (1.62)  |
| Seabird Winter Offshore | 1.23             | (1.16)  |
| Porpoise Northsea       | 0.73             | (0.78)  |
| Herring                 | 0.68             | (0.7)   |
| Hardbottom Deep         | 0.3              | (0.3)   |
| Transportbottom Photic  | 0.27             | (0.27)  |
| Birds Coastal           | 0.21             | (0.2)   |
| Hardbottom Photic       | 0.11             | (0.11)  |
| Mussel Reefs Total      | 0.01             | (0.01)  |
| Artificial Reefs Total  | 0.01             | (0.0)   |
| Seabird Winter Coastal  | 0.0              | (0.0)   |
| Grey Seals              | 0.0              | (0.0)   |
| Rivermouth Fish         | 0.0              | (0.0)   |
| Haploops Reef           | 0.0              | (0.0)   |
| Deep Reef               | 0.0              | (0.0)   |
| Angiosperms             | 0.0              | (0.0)   |
| Shoreline Complexity    | 0.0              | (0.0)   |
| Softbottom Deep         | 0.0              | (0.0)   |
| Hardbottom Aphotic      | 0.0              | (0.0)   |
| Transportbottom Deep    | 0.0              | (0.0)   |

Calculated with SyM

Date: 2018-03-22

Medins Havs och Vattenkonsulter AB



V307\_Ef

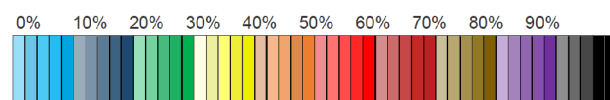
Miljöpåverkan i området jämfört med medelvärde för:

|                             |      |
|-----------------------------|------|
| S4 Västerhavet              | 49%  |
| S4 Kattegatt                | 57%  |
| S3 framtidsscenario år 2030 | 100% |

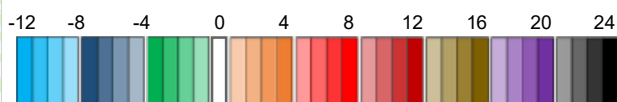
Områden och huvudanvändning



Procentuell andel av den högsta miljöpåverkan i Västerhavet, inklusive kustområden (S4)

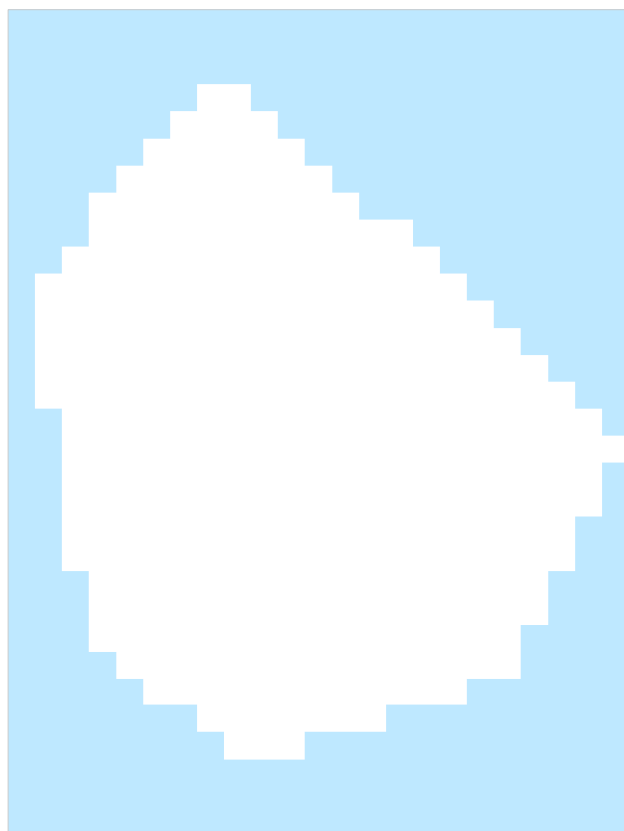
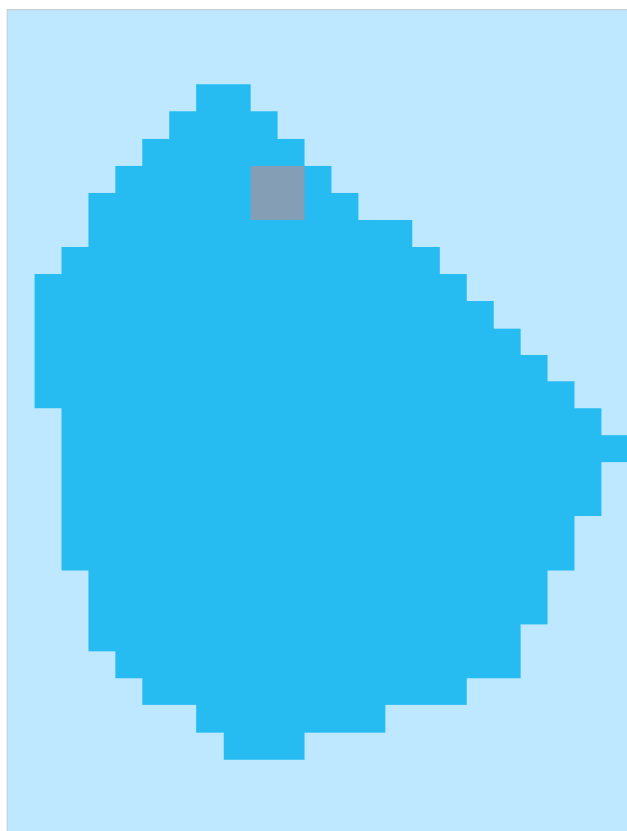


S4 plan 2030 - S3 Nollalternativ 2030.  
S4, S3 uttryckt som procentuell andel av den högsta miljöpåverkan i Västerhavet, inklusive kustområden.



S4 plan 2030

S4 plan 2030 - Nollalternativ 2030.



## Impacts Per Pressure

| Name                             | % of Total<br>S4 | (S3)    |
|----------------------------------|------------------|---------|
| Eutrophication                   |                  |         |
| Phosphorous Background           | 4.53             | (4.53)  |
| Anoxia Background                | 4.47             | (4.47)  |
| Nitrogen Background              | 41.66            | (41.66) |
| Total                            | 50.66            | (50.66) |
| General pollution                |                  |         |
| Tox Metal Background             | 6.85             | (6.85)  |
| Oilspill 2knots Wreck            | 0.0              | (0.0)   |
| Tox Synthetic Background         | 13.42            | (13.42) |
| Tox Munition                     | 0.0              | (0.0)   |
| Tox Mine Risk                    | 0.0              | (0.0)   |
| Total                            | 20.27            | (20.27) |
| Shipping                         |                  |         |
| Turbidity Shipping               | 0.0              | (0.0)   |
| Noise 2000Hz Shipping            | 0.0              | (0.0)   |
| Oilspill 2knots Shipping         | 2.62             | (2.62)  |
| Noise 125Hz Shipping             | 19.4             | (19.4)  |
| Total                            | 22.02            | (22.02) |
| Coastal development              |                  |         |
| Tox Synthetic Treatmentplants    | 0.0              | (0.0)   |
| Habitatloss Dumping              | 1.33             | (1.33)  |
| Infrastructure                   | 0.0              | (0.0)   |
| Habitatloss Coastal Exploitation | 0.0              | (0.0)   |
| Total                            | 1.33             | (1.33)  |
| Recreational activities          |                  |         |
| Boating Pollution                | 0.0              | (0.0)   |
| Boating Noise                    | 0.0              | (0.0)   |
| Birdhunt                         | 0.0              | (0.0)   |
| Total                            | 0.0              | (0.0)   |
| Fisheries                        |                  |         |
| Abrasion Bottomtrawl             | 0.0              | (0.0)   |
| Catch Gillnet                    | 0.0              | (0.0)   |
| Turbidity Bottom trawl           | 0.0              | (0.0)   |
| Catch Bottom trawl               | 0.0              | (0.0)   |
| Catch Pelagic trawl              | 0.0              | (0.0)   |
| Total                            | 0.0              | (0.0)   |
| Industry                         |                  |         |
| Tox Synthetic Industry           | 0.0              | (0.0)   |
| Tox Synthetic Harbor             | 0.0              | (0.0)   |
| Total                            | 0.0              | (0.0)   |
| Mineral mining                   |                  |         |
| Turbidity Mining                 | 0.0              | (0.0)   |
| Habitat Loss Mining              | 0.0              | (0.0)   |
| Total                            | 0.0              | (0.0)   |
| Defence                          |                  |         |
| Tox Metal Military               | 0.0              | (0.0)   |
| Explosion SPL                    | 0.0              | (0.0)   |
| Explosion PM                     | 0.0              | (0.0)   |
| Total                            | 0.0              | (0.0)   |
| Aquaculture                      |                  |         |
| Habitatloss Mussel farming       | 0.0              | (0.0)   |
| Total                            | 0.0              | (0.0)   |
| Energy                           |                  |         |
| Avoidance Windpower              | 1.97             | (1.97)  |
| Noise 125Hz Windpower            | 3.53             | (3.53)  |
| EMF                              | 0.22             | (0.22)  |
| Total                            | 5.72             | (5.72)  |

V307\_Ef

## Cumulative Effect

|           | S4        | (S3)        |
|-----------|-----------|-------------|
| Total     | 4160254.0 | (4160254.0) |
| Mean      | 11818.9   | (11818.9)   |
| Std. Dev. | 1491.4    | (1491.4)    |
| Min       | 10853.5   | (10853.5)   |
| Max       | 25735.8   | (25735.8)   |
| Area km²  | 22.01     |             |

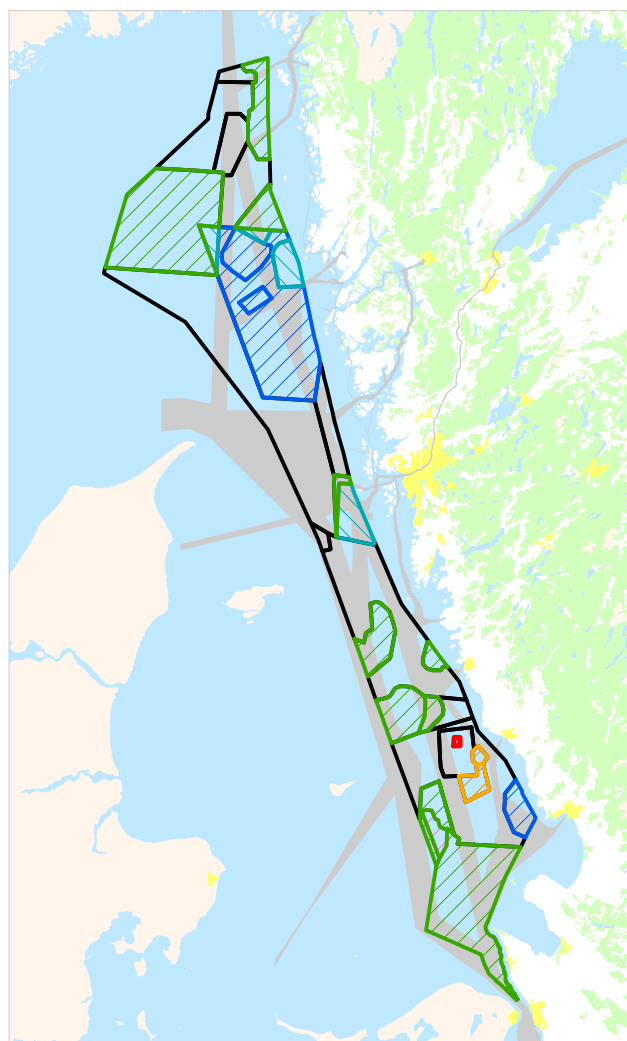
## Impacts Per Ecocomponent

| Name                    | % of Total<br>S4 | (S3)    |
|-------------------------|------------------|---------|
| Softbottom Photic       | 33.63            | (33.63) |
| Spawning Fish           | 16.88            | (16.88) |
| Cod                     | 11.44            | (11.44) |
| Plankton Community      | 10.53            | (10.53) |
| Porpoise Beltsea        | 9.09             | (9.09)  |
| Seabird Winter Offshore | 6.59             | (6.59)  |
| Eel Migration           | 4.05             | (4.05)  |
| Transportbottom Photic  | 2.89             | (2.89)  |
| Sprat                   | 2.32             | (2.32)  |
| Harbour Seals           | 0.99             | (0.99)  |
| Herring                 | 0.86             | (0.86)  |
| Hardbottom Photic       | 0.69             | (0.69)  |
| Artificial Reefs Total  | 0.05             | (0.05)  |
| Haploops Reef           | 0.0              | (0.0)   |
| Angiosperms             | 0.0              | (0.0)   |
| Seabird Winter Coastal  | 0.0              | (0.0)   |
| Birds Coastal           | 0.0              | (0.0)   |
| Rivermouth Fish         | 0.0              | (0.0)   |
| Grey Seals              | 0.0              | (0.0)   |
| Softbottom Deep         | 0.0              | (0.0)   |
| Shoreline Complexity    | 0.0              | (0.0)   |
| Softbottom Aphotic      | 0.0              | (0.0)   |
| Mussel Reefs Total      | 0.0              | (0.0)   |
| Porpoise Northsea       | 0.0              | (0.0)   |
| Transportbottom Aphotic | 0.0              | (0.0)   |
| Hardbottom Deep         | 0.0              | (0.0)   |
| Hardbottom Aphotic      | 0.0              | (0.0)   |
| Deep Reef               | 0.0              | (0.0)   |
| Transportbottom Deep    | 0.0              | (0.0)   |

Calculated with SyM

Date: 2018-03-22

Medins Havs och Vattenkonsulter AB



V308\_N

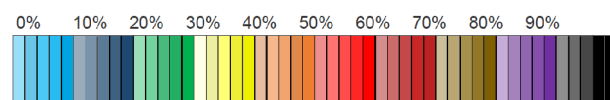
Miljöpåverkan i området jämfört med medelvärde för:

|                             |      |
|-----------------------------|------|
| S4 Västerhavet              | 80%  |
| S4 Kattegatt                | 92%  |
| S3 framtidsscenario år 2030 | 100% |

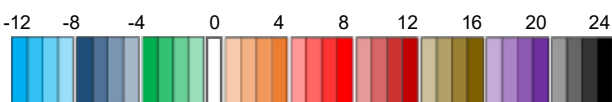
Områden och huvudanvändning



Procentuell andel av den högsta miljöpåverkan i Västerhavet, inklusive kustområden (S4)

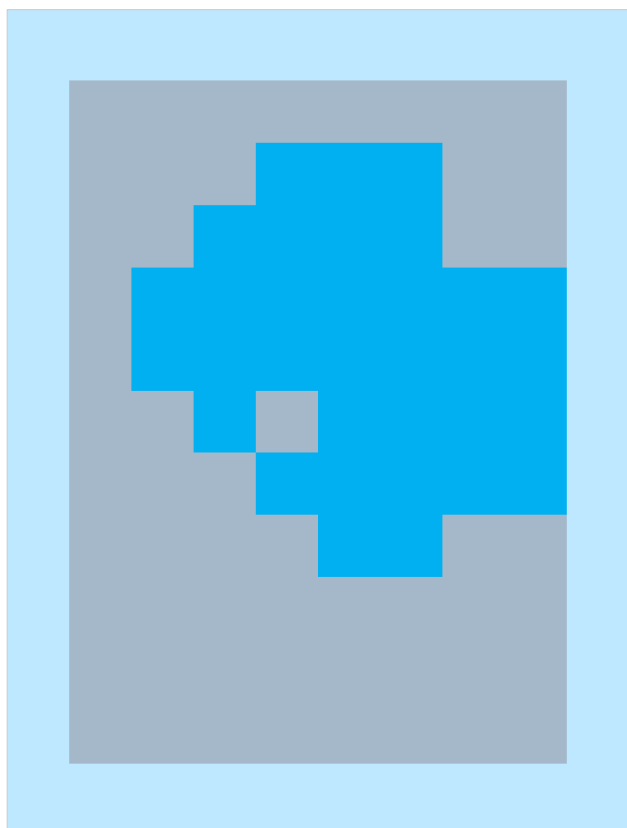


S4 plan 2030 - S3 Nollalternativ 2030.  
S4, S3 uttryckt som procentuell andel av den högsta miljöpåverkan i Västerhavet, inklusive kustområden.



S4 plan 2030

S4 plan 2030 - Nollalternativ 2030.



## Impacts Per Pressure

| Name                             | % of Total<br>S4 | (S3)    |
|----------------------------------|------------------|---------|
| Eutrophication                   |                  |         |
| Phosphorous Background           | 2.59             | (2.59)  |
| Anoxia Background                | 3.28             | (3.28)  |
| Nitrogen Background              | 24.13            | (24.13) |
| Total                            | 30.01            | (30.01) |
| General pollution                |                  |         |
| Tox Metal Background             | 1.99             | (1.99)  |
| Oilspill 2knots Wreck            | 0.0              | (0.0)   |
| Tox Synthetic Background         | 7.05             | (7.05)  |
| Tox Munition                     | 0.0              | (0.0)   |
| Tox Mine Risk                    | 0.0              | (0.0)   |
| Total                            | 9.04             | (9.04)  |
| Shipping                         |                  |         |
| Turbidity Shipping               | 0.0              | (0.0)   |
| Noise 2000Hz Shipping            | 0.0              | (0.0)   |
| Oilspill 2knots Shipping         | 1.42             | (1.42)  |
| Noise 125Hz Shipping             | 11.41            | (11.41) |
| Total                            | 12.83            | (12.83) |
| Coastal development              |                  |         |
| Tox Synthetic Treatmentplants    | 0.0              | (0.0)   |
| Habitatloss Dumping              | 0.0              | (0.0)   |
| Infrastructure                   | 0.0              | (0.0)   |
| Habitatloss Coastal Exploitation | 0.0              | (0.0)   |
| Total                            | 0.0              | (0.0)   |
| Recreational activities          |                  |         |
| Boating Pollution                | 0.0              | (0.0)   |
| Boating Noise                    | 0.0              | (0.0)   |
| Birdhunt                         | 0.08             | (0.08)  |
| Total                            | 0.08             | (0.08)  |
| Fisheries                        |                  |         |
| Abrasion Bottomtrawl             | 25.91            | (25.91) |
| Catch Gillnet                    | 0.0              | (0.0)   |
| Turbidity Bottom trawl           | 9.74             | (9.74)  |
| Catch Bottom trawl               | 12.4             | (12.4)  |
| Catch Pelagic trawl              | 0.0              | (0.0)   |
| Total                            | 48.05            | (48.05) |
| Industry                         |                  |         |
| Tox Synthetic Industry           | 0.0              | (0.0)   |
| Tox Synthetic Harbor             | 0.0              | (0.0)   |
| Total                            | 0.0              | (0.0)   |
| Mineral mining                   |                  |         |
| Turbidity Mining                 | 0.0              | (0.0)   |
| Habitat Loss Mining              | 0.0              | (0.0)   |
| Total                            | 0.0              | (0.0)   |
| Defence                          |                  |         |
| Tox Metal Military               | 0.0              | (0.0)   |
| Explosion SPL                    | 0.0              | (0.0)   |
| Explosion PM                     | 0.0              | (0.0)   |
| Total                            | 0.0              | (0.0)   |
| Aquaculture                      |                  |         |
| Habitatloss Mussel farming       | 0.0              | (0.0)   |
| Total                            | 0.0              | (0.0)   |
| Energy                           |                  |         |
| Avoidance Windpower              | 0.0              | (0.0)   |
| Noise 125Hz Windpower            | 0.0              | (0.0)   |
| EMF                              | 0.0              | (0.0)   |
| Total                            | 0.0              | (0.0)   |

V308\_N

## Cumulative Effect

|           | S4        | (S3)        |
|-----------|-----------|-------------|
| Total     | 1681915.4 | (1681915.4) |
| Mean      | 19112.7   | (19112.7)   |
| Std. Dev. | 1462.2    | (1462.2)    |
| Min       | 15705.0   | (15705.0)   |
| Max       | 21254.2   | (21254.2)   |
| Area km²  | 5.66      |             |

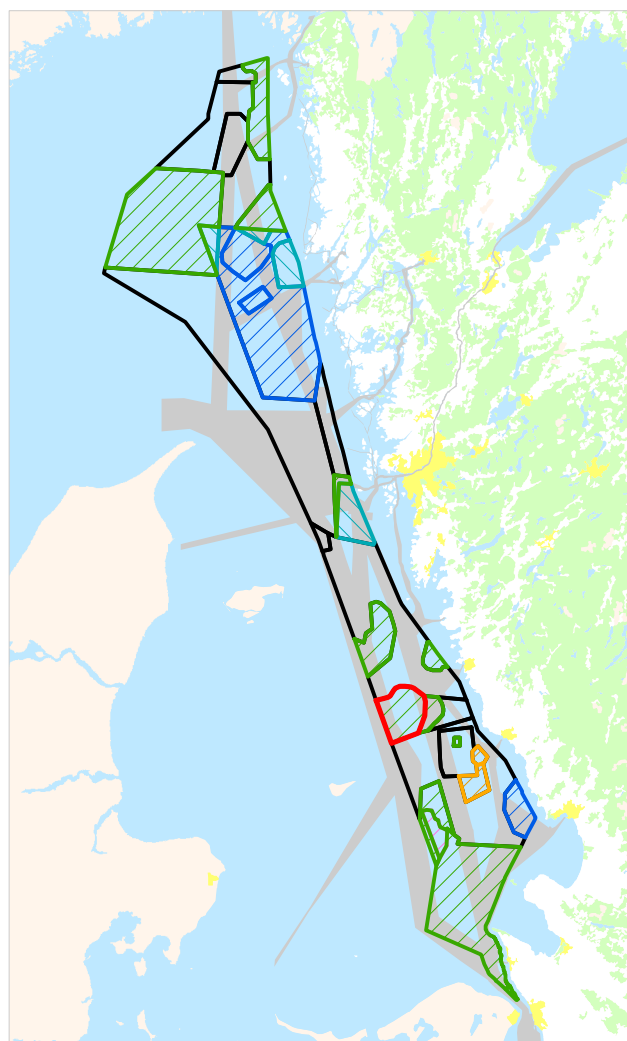
## Impacts Per Ecocomponent

| Name                    | % of Total<br>S4 | (S3)    |
|-------------------------|------------------|---------|
| Softbottom Aphotic      | 20.93            | (20.93) |
| Spawning Fish           | 17.53            | (17.53) |
| Cod                     | 12.55            | (12.55) |
| Plankton Community      | 9.71             | (9.71)  |
| Porpoise Beltsea        | 9.64             | (9.64)  |
| Transportbottom Photic  | 5.83             | (5.83)  |
| Transportbottom Aphotic | 4.92             | (4.92)  |
| Softbottom Photic       | 4.05             | (4.05)  |
| Hardbottom Photic       | 3.76             | (3.76)  |
| Harbour Seals           | 2.53             | (2.53)  |
| Eel Migration           | 2.47             | (2.47)  |
| Sprat                   | 2.24             | (2.24)  |
| Seabird Winter Offshore | 1.16             | (1.16)  |
| Porpoise Northsea       | 1.03             | (1.03)  |
| Hardbottom Deep         | 0.73             | (0.73)  |
| Herring                 | 0.71             | (0.71)  |
| Mussel Reefs Total      | 0.21             | (0.21)  |
| Hardbottom Aphotic      | 0.0              | (0.0)   |
| Artificial Reefs Total  | 0.0              | (0.0)   |
| Softbottom Deep         | 0.0              | (0.0)   |
| Shoreline Complexity    | 0.0              | (0.0)   |
| Angiosperms             | 0.0              | (0.0)   |
| Haploops Reef           | 0.0              | (0.0)   |
| Deep Reef               | 0.0              | (0.0)   |
| Rivermouth Fish         | 0.0              | (0.0)   |
| Grey Seals              | 0.0              | (0.0)   |
| Birds Coastal           | 0.0              | (0.0)   |
| Seabird Winter Coastal  | 0.0              | (0.0)   |
| Transportbottom Deep    | 0.0              | (0.0)   |

Calculated with SyM

Date: 2018-03-22

Medins Havs och Vattenkonsulter AB



V309\_N

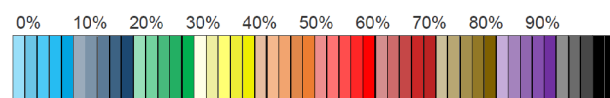
Miljöpåverkan i området jämfört med medelvärde för:

|                             |      |
|-----------------------------|------|
| S4 Västerhavet              | 82%  |
| S4 Kattegatt                | 94%  |
| S3 framtidsscenario år 2030 | 100% |

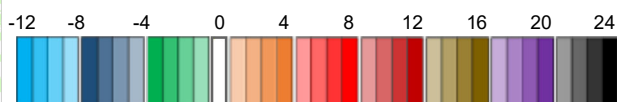
Områden och huvudanvändning



Procentuell andel av den högsta miljöpåverkan i Västerhavet, inklusive kustområden (S4)

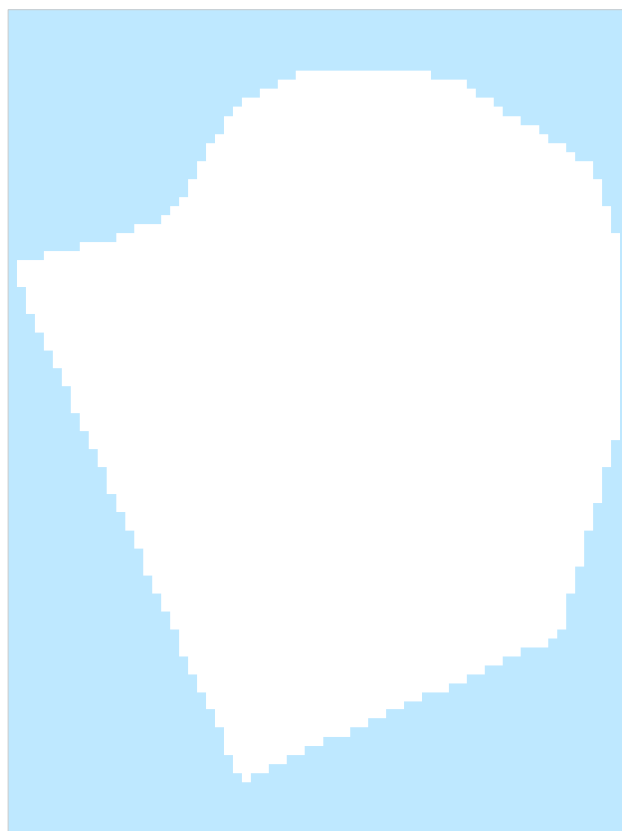
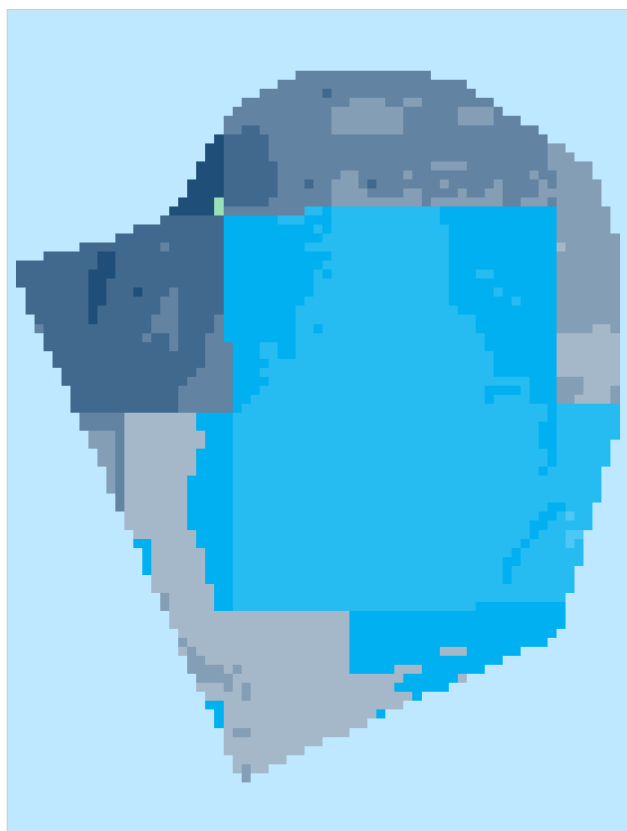


S4 plan 2030 - S3 Nollalternativ 2030.  
S4, S3 uttryckt som procentuell andel av den högsta miljöpåverkan i Västerhavet, inklusive kustområden.



S4 plan 2030

S4 plan 2030 - Nollalternativ 2030.



## Impacts Per Pressure

| Name                             | % of Total<br>S4 | (S3)    |
|----------------------------------|------------------|---------|
| Eutrophication                   |                  |         |
| Phosphorous Background           | 2.97             | (2.97)  |
| Anoxia Background                | 8.57             | (8.57)  |
| Nitrogen Background              | 23.45            | (23.45) |
| Total                            | 34.98            | (34.98) |
| General pollution                |                  |         |
| Tox Metal Background             | 0.34             | (0.34)  |
| Oilspill 2knots Wreck            | 0.0              | (0.0)   |
| Tox Synthetic Background         | 6.64             | (6.64)  |
| Tox Munition                     | 0.0              | (0.0)   |
| Tox Mine Risk                    | 0.0              | (0.0)   |
| Total                            | 6.98             | (6.98)  |
| Shipping                         |                  |         |
| Turbidity Shipping               | 0.04             | (0.04)  |
| Noise 2000Hz Shipping            | 0.05             | (0.05)  |
| Oilspill 2knots Shipping         | 2.85             | (2.85)  |
| Noise 125Hz Shipping             | 23.27            | (23.27) |
| Total                            | 26.21            | (26.21) |
| Coastal development              |                  |         |
| Tox Synthetic Treatmentplants    | 0.0              | (0.0)   |
| Habitatloss Dumping              | 0.0              | (0.0)   |
| Infrastructure                   | 0.0              | (0.0)   |
| Habitatloss Coastal Exploitation | 0.0              | (0.0)   |
| Total                            | 0.0              | (0.0)   |
| Recreational activities          |                  |         |
| Boating Pollution                | 0.0              | (0.0)   |
| Boating Noise                    | 0.0              | (0.0)   |
| Birdhunt                         | 0.0              | (0.0)   |
| Total                            | 0.0              | (0.0)   |
| Fisheries                        |                  |         |
| Abrasion Bottomtrawl             | 16.58            | (16.58) |
| Catch Gillnet                    | 0.0              | (0.0)   |
| Turbidity Bottom trawl           | 6.33             | (6.33)  |
| Catch Bottom trawl               | 8.84             | (8.84)  |
| Catch Pelagic trawl              | 0.08             | (0.08)  |
| Total                            | 31.83            | (31.83) |
| Industry                         |                  |         |
| Tox Synthetic Industry           | 0.0              | (0.0)   |
| Tox Synthetic Harbor             | 0.0              | (0.0)   |
| Total                            | 0.0              | (0.0)   |
| Mineral mining                   |                  |         |
| Turbidity Mining                 | 0.0              | (0.0)   |
| Habitat Loss Mining              | 0.0              | (0.0)   |
| Total                            | 0.0              | (0.0)   |
| Defence                          |                  |         |
| Tox Metal Military               | 0.0              | (0.0)   |
| Explosion SPL                    | 0.0              | (0.0)   |
| Explosion PM                     | 0.0              | (0.0)   |
| Total                            | 0.0              | (0.0)   |
| Aquaculture                      |                  |         |
| Habitatloss Mussel farming       | 0.0              | (0.0)   |
| Total                            | 0.0              | (0.0)   |
| Energy                           |                  |         |
| Avoidance Windpower              | 0.0              | (0.0)   |
| Noise 125Hz Windpower            | 0.0              | (0.0)   |
| EMF                              | 0.0              | (0.0)   |
| Total                            | 0.0              | (0.0)   |

V309\_N

## Cumulative Effect

|           | S4         | (S3)         |
|-----------|------------|--------------|
| Total     | 69932517.3 | (69932517.3) |
| Mean      | 19578.0    | (19578.0)    |
| Std. Dev. | 7192.2     | (7192.2)     |
| Min       | 10753.9    | (10753.9)    |
| Max       | 38812.8    | (38812.8)    |
| Area km²  | 223.46     |              |

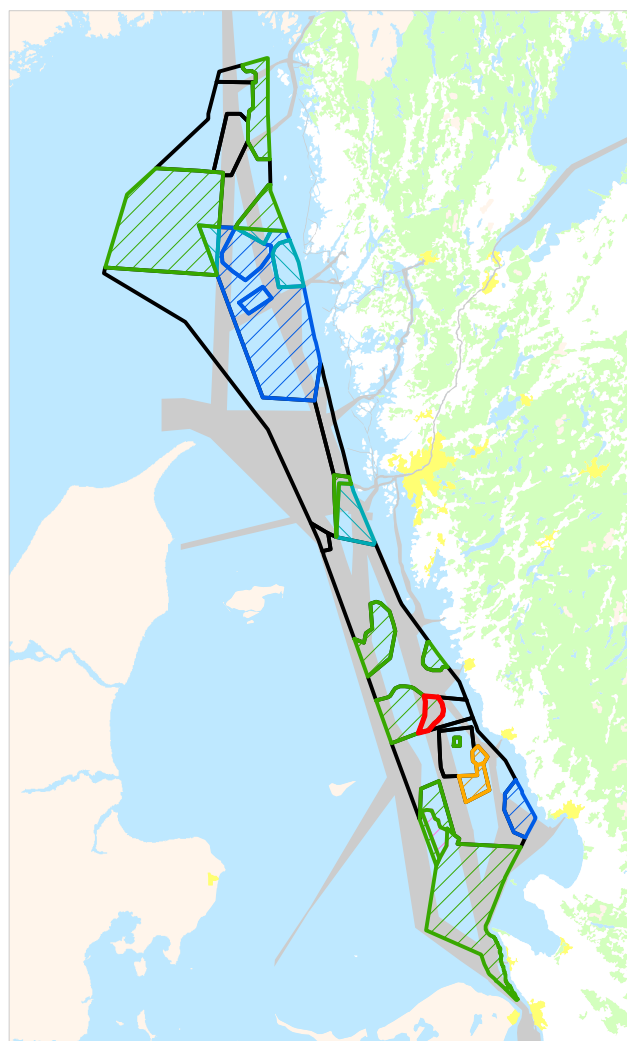
## Impacts Per Ecocomponent

| Name                    | % of Total<br>S4 | (S3)    |
|-------------------------|------------------|---------|
| Softbottom Aphotic      | 17.91            | (17.91) |
| Cod                     | 13.35            | (13.35) |
| Spawning Fish           | 13.17            | (13.17) |
| Porpoise Northsea       | 8.81             | (8.81)  |
| Plankton Community      | 7.59             | (7.59)  |
| Transportbottom Photic  | 6.95             | (6.95)  |
| Porpoise Beltsea        | 6.95             | (6.95)  |
| Sprat                   | 6.06             | (6.06)  |
| Transportbottom Aphotic | 4.98             | (4.98)  |
| Softbottom Photic       | 4.11             | (4.11)  |
| Herring                 | 3.74             | (3.74)  |
| Harbour Seals           | 3.41             | (3.41)  |
| Hardbottom Photic       | 1.46             | (1.46)  |
| Seabird Winter Offshore | 0.66             | (0.66)  |
| Eel Migration           | 0.51             | (0.51)  |
| Hardbottom Deep         | 0.27             | (0.27)  |
| Artificial Reefs Total  | 0.04             | (0.04)  |
| Softbottom Deep         | 0.01             | (0.01)  |
| Mussel Reefs Total      | 0.0              | (0.0)   |
| Transportbottom Deep    | 0.0              | (0.0)   |
| Hardbottom Aphotic      | 0.0              | (0.0)   |
| Shoreline Complexity    | 0.0              | (0.0)   |
| Angiosperms             | 0.0              | (0.0)   |
| Haploops Reef           | 0.0              | (0.0)   |
| Deep Reef               | 0.0              | (0.0)   |
| Grey Seals              | 0.0              | (0.0)   |
| Rivermouth Fish         | 0.0              | (0.0)   |
| Birds Coastal           | 0.0              | (0.0)   |
| Seabird Winter Coastal  | 0.0              | (0.0)   |

Calculated with SyM

Date: 2018-03-22

Medins Havs och Vattenkonsulter AB



V310\_N

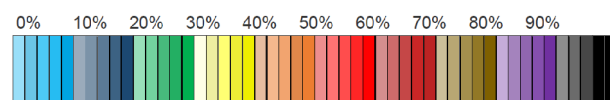
Miljöpåverkan i området jämfört med medelvärde för:

|                             |      |
|-----------------------------|------|
| S4 Västerhavet              | 84%  |
| S4 Kattegatt                | 97%  |
| S3 framtidsscenario år 2030 | 100% |

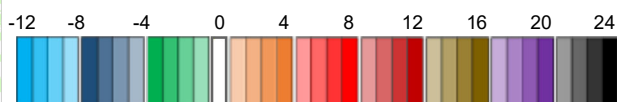
Områden och huvudanvändning



Procentuell andel av den högsta miljöpåverkan i Västerhavet, inklusive kustområden (S4)

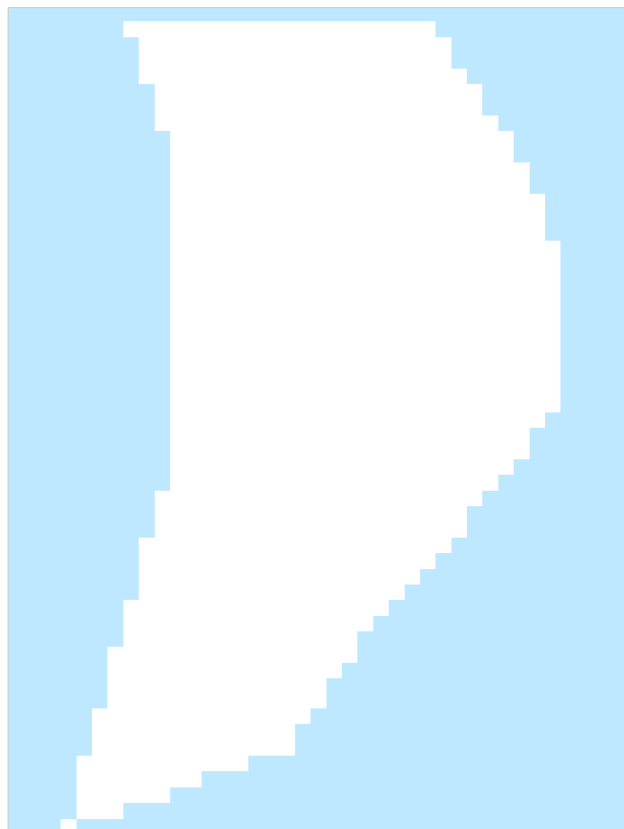
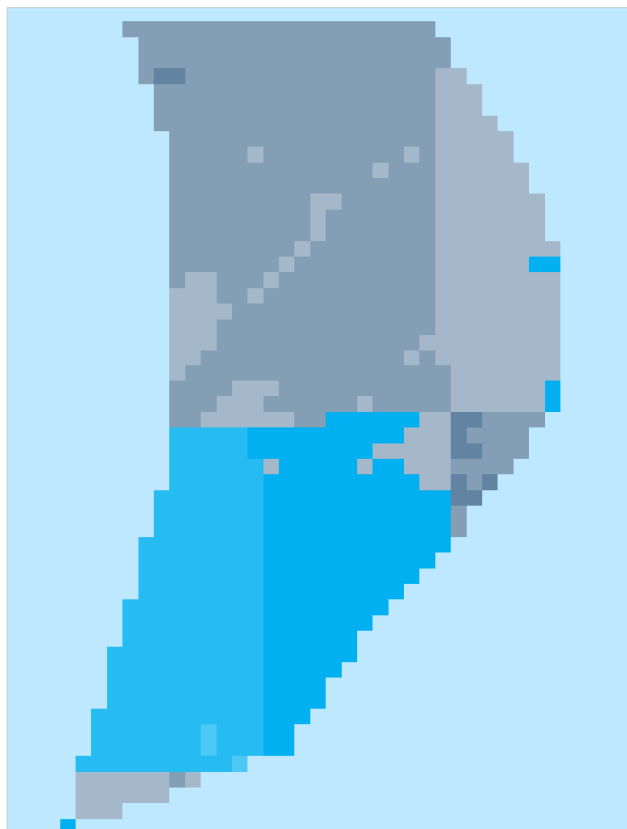


S4 plan 2030 - S3 Nollalternativ 2030.  
S4, S3 uttryckt som procentuell andel av den högsta miljöpåverkan i Västerhavet, inklusive kustområden.



S4 plan 2030

S4 plan 2030 - Nollalternativ 2030.



## Impacts Per Pressure

| Name                             | % of Total<br>S4 | (S3)    |
|----------------------------------|------------------|---------|
| Eutrophication                   |                  |         |
| Phosphorous Background           | 2.96             | (2.96)  |
| Anoxia Background                | 3.9              | (3.9)   |
| Nitrogen Background              | 23.41            | (23.41) |
| Total                            | 30.27            | (30.27) |
| General pollution                |                  |         |
| Tox Metal Background             | 0.35             | (0.35)  |
| Oilspill 2knots Wreck            | 0.0              | (0.0)   |
| Tox Synthetic Background         | 8.12             | (8.12)  |
| Tox Munition                     | 0.0              | (0.0)   |
| Tox Mine Risk                    | 0.0              | (0.0)   |
| Total                            | 8.47             | (8.47)  |
| Shipping                         |                  |         |
| Turbidity Shipping               | 0.06             | (0.06)  |
| Noise 2000Hz Shipping            | 0.04             | (0.04)  |
| Oilspill 2knots Shipping         | 2.6              | (2.6)   |
| Noise 125Hz Shipping             | 20.85            | (20.85) |
| Total                            | 23.54            | (23.54) |
| Coastal development              |                  |         |
| Tox Synthetic Treatmentplants    | 0.0              | (0.0)   |
| Habitatloss Dumping              | 0.0              | (0.0)   |
| Infrastructure                   | 0.0              | (0.0)   |
| Habitatloss Coastal Exploitation | 0.0              | (0.0)   |
| Total                            | 0.0              | (0.0)   |
| Recreational activities          |                  |         |
| Boating Pollution                | 0.0              | (0.0)   |
| Boating Noise                    | 0.0              | (0.0)   |
| Birdhunt                         | 0.02             | (0.02)  |
| Total                            | 0.02             | (0.02)  |
| Fisheries                        |                  |         |
| Abrasion Bottomtrawl             | 21.13            | (21.13) |
| Catch Gillnet                    | 0.0              | (0.0)   |
| Turbidity Bottom trawl           | 7.16             | (7.16)  |
| Catch Bottom trawl               | 9.41             | (9.41)  |
| Catch Pelagic trawl              | 0.0              | (0.0)   |
| Total                            | 37.7             | (37.7)  |
| Industry                         |                  |         |
| Tox Synthetic Industry           | 0.0              | (0.0)   |
| Tox Synthetic Harbor             | 0.0              | (0.0)   |
| Total                            | 0.0              | (0.0)   |
| Mineral mining                   |                  |         |
| Turbidity Mining                 | 0.0              | (0.0)   |
| Habitat Loss Mining              | 0.0              | (0.0)   |
| Total                            | 0.0              | (0.0)   |
| Defence                          |                  |         |
| Tox Metal Military               | 0.0              | (0.0)   |
| Explosion SPL                    | 0.0              | (0.0)   |
| Explosion PM                     | 0.0              | (0.0)   |
| Total                            | 0.0              | (0.0)   |
| Aquaculture                      |                  |         |
| Habitatloss Mussel farming       | 0.0              | (0.0)   |
| Total                            | 0.0              | (0.0)   |
| Energy                           |                  |         |
| Avoidance Windpower              | 0.0              | (0.0)   |
| Noise 125Hz Windpower            | 0.0              | (0.0)   |
| EMF                              | 0.0              | (0.0)   |
| Total                            | 0.0              | (0.0)   |

V310\_N

## Cumulative Effect

|           | S4         | (S3)         |
|-----------|------------|--------------|
| Total     | 20258320.8 | (20258320.8) |
| Mean      | 20137.5    | (20137.5)    |
| Std. Dev. | 4530.6     | (4530.6)     |
| Min       | 10399.0    | (10399.0)    |
| Max       | 28881.1    | (28881.1)    |
| Area km²  | 62.58      |              |

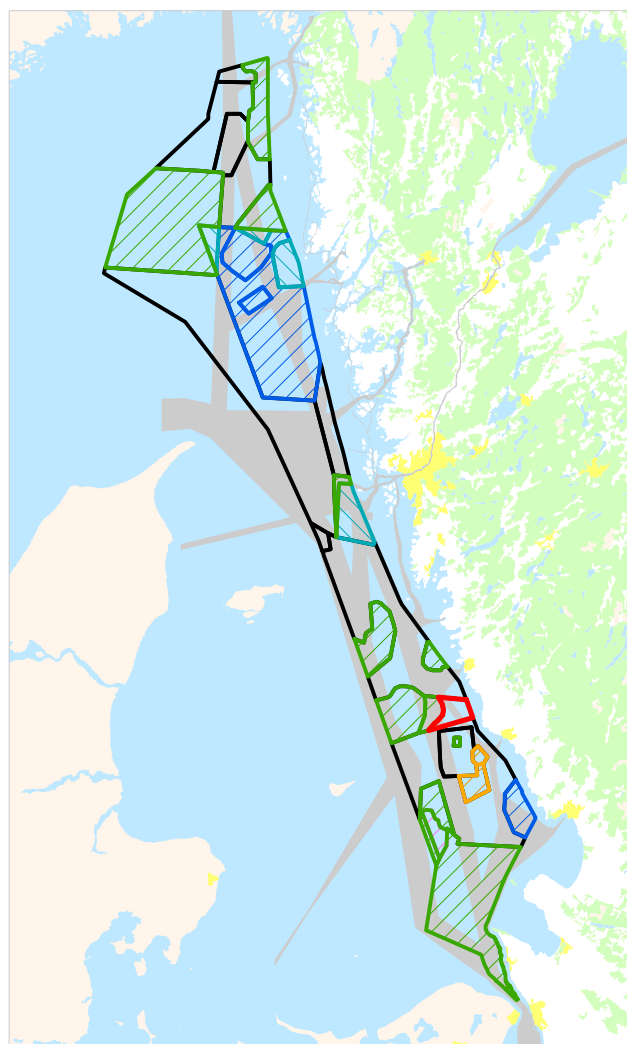
## Impacts Per Ecocomponent

| Name                    | % of Total<br>S4 | (S3)    |
|-------------------------|------------------|---------|
| Softbottom Aphotic      | 24.06            | (24.06) |
| Spawning Fish           | 13.62            | (13.62) |
| Cod                     | 11.38            | (11.38) |
| Porpoise Northsea       | 10.46            | (10.46) |
| Plankton Community      | 8.64             | (8.64)  |
| Porpoise Beltsea        | 6.76             | (6.76)  |
| Transportbottom Aphotic | 5.58             | (5.58)  |
| Harbour Seals           | 5.21             | (5.21)  |
| Transportbottom Photic  | 2.83             | (2.83)  |
| Sprat                   | 2.71             | (2.71)  |
| Softbottom Photic       | 2.64             | (2.64)  |
| Eel Migration           | 2.55             | (2.55)  |
| Hardbottom Photic       | 1.34             | (1.34)  |
| Herring                 | 0.98             | (0.98)  |
| Hardbottom Deep         | 0.75             | (0.75)  |
| Seabird Winter Offshore | 0.48             | (0.48)  |
| Mussel Reefs Total      | 0.03             | (0.03)  |
| Hardbottom Aphotic      | 0.0              | (0.0)   |
| Softbottom Deep         | 0.0              | (0.0)   |
| Shoreline Complexity    | 0.0              | (0.0)   |
| Angiosperms             | 0.0              | (0.0)   |
| Artificial Reefs Total  | 0.0              | (0.0)   |
| Haploops Reef           | 0.0              | (0.0)   |
| Deep Reef               | 0.0              | (0.0)   |
| Rivermouth Fish         | 0.0              | (0.0)   |
| Grey Seals              | 0.0              | (0.0)   |
| Birds Coastal           | 0.0              | (0.0)   |
| Seabird Winter Coastal  | 0.0              | (0.0)   |
| Transportbottom Deep    | 0.0              | (0.0)   |

Calculated with SyM

Date: 2018-03-22

Medins Havs och Vattenkonsulter AB



V311\_Gn

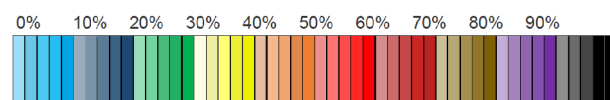
Miljöpåverkan i området jämfört med medelvärde för:

|                             |     |
|-----------------------------|-----|
| S4 Västerhavet              | 79% |
| S4 Kattegatt                | 92% |
| S3 framtidsscenario år 2030 | 95% |

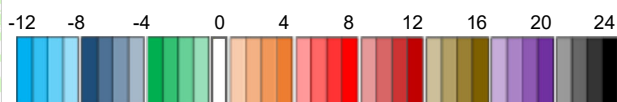
Områden och huvudanvändning



Procentuell andel av den högsta miljöpåverkan i Västerhavet, inklusive kustområden (S4)

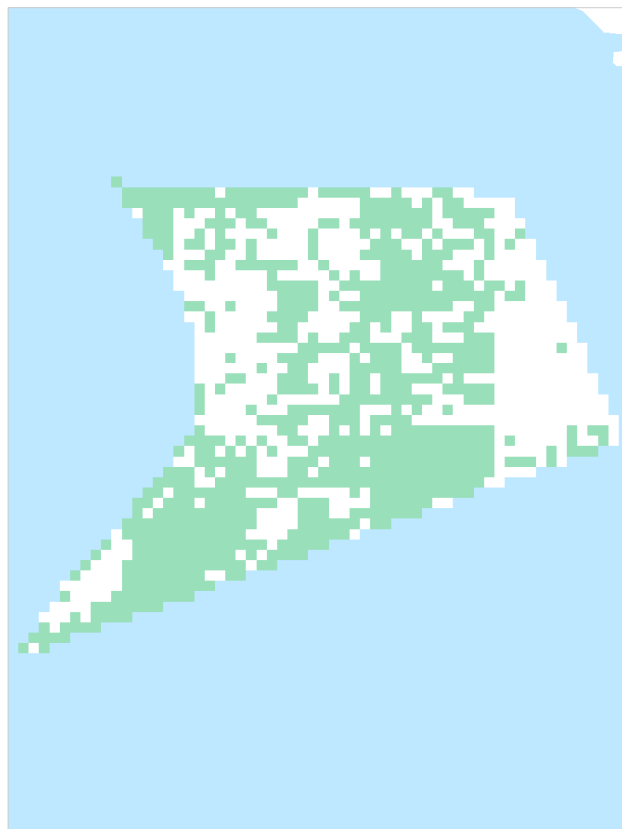
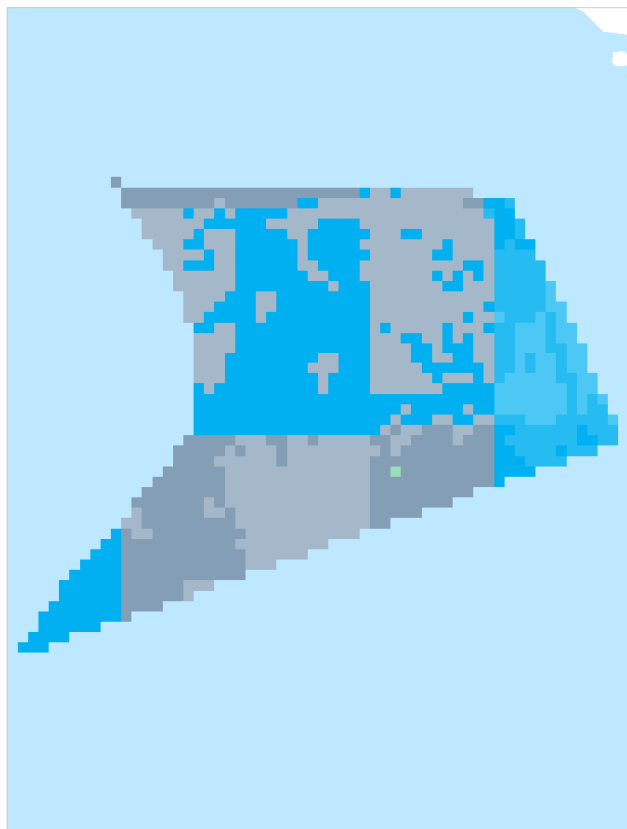


S4 plan 2030 - S3 Nollalternativ 2030.  
S4, S3 uttryckt som procentuell andel av den högsta miljöpåverkan i Västerhavet, inklusive kustområden.



S4 plan 2030

S4 plan 2030 - Nollalternativ 2030.



## Impacts Per Pressure

| Name                             | % of Total<br>S4 | (S3)    |
|----------------------------------|------------------|---------|
| Eutrophication                   |                  |         |
| Phosphorous Background           | 3.31             | (3.15)  |
| Anoxia Background                | 4.62             | (4.41)  |
| Nitrogen Background              | 25.09            | (23.92) |
| Total                            | 33.02            | (31.48) |
| General pollution                |                  |         |
| Tox Metal Background             | 0.05             | (0.04)  |
| Oilspill 2knots Wreck            | 0.0              | (0.0)   |
| Tox Synthetic Background         | 8.16             | (7.78)  |
| Tox Munition                     | 0.0              | (0.0)   |
| Tox Mine Risk                    | 0.0              | (0.0)   |
| Total                            | 8.2              | (7.82)  |
| Shipping                         |                  |         |
| Turbidity Shipping               | 0.0              | (0.0)   |
| Noise 2000Hz Shipping            | 0.0              | (0.0)   |
| Oilspill 2knots Shipping         | 1.98             | (1.88)  |
| Noise 125Hz Shipping             | 18.34            | (17.48) |
| Total                            | 20.31            | (19.36) |
| Coastal development              |                  |         |
| Tox Synthetic Treatmentplants    | 0.0              | (0.0)   |
| Habitatloss Dumping              | 0.0              | (0.0)   |
| Infrastructure                   | 0.0              | (0.0)   |
| Habitatloss Coastal Exploitation | 0.0              | (0.0)   |
| Total                            | 0.0              | (0.0)   |
| Recreational activities          |                  |         |
| Boating Pollution                | 0.15             | (0.14)  |
| Boating Noise                    | 0.04             | (0.04)  |
| Birdhunt                         | 0.06             | (0.06)  |
| Total                            | 0.25             | (0.24)  |
| Fisheries                        |                  |         |
| Abrasion Bottomtrawl             | 23.52            | (22.5)  |
| Catch Gillnet                    | 0.55             | (0.69)  |
| Turbidity Bottom trawl           | 8.41             | (8.04)  |
| Catch Bottom trawl               | 5.72             | (9.85)  |
| Catch Pelagic trawl              | 0.0              | (0.0)   |
| Total                            | 38.21            | (41.09) |
| Industry                         |                  |         |
| Tox Synthetic Industry           | 0.0              | (0.0)   |
| Tox Synthetic Harbor             | 0.0              | (0.0)   |
| Total                            | 0.0              | (0.0)   |
| Mineral mining                   |                  |         |
| Turbidity Mining                 | 0.0              | (0.0)   |
| Habitat Loss Mining              | 0.0              | (0.0)   |
| Total                            | 0.0              | (0.0)   |
| Defence                          |                  |         |
| Tox Metal Military               | 0.0              | (0.0)   |
| Explosion SPL                    | 0.0              | (0.0)   |
| Explosion PM                     | 0.0              | (0.0)   |
| Total                            | 0.0              | (0.0)   |
| Aquaculture                      |                  |         |
| Habitatloss Mussel farming       | 0.0              | (0.0)   |
| Total                            | 0.0              | (0.0)   |
| Energy                           |                  |         |
| Avoidance Windpower              | 0.0              | (0.0)   |
| Noise 125Hz Windpower            | 0.0              | (0.0)   |
| EMF                              | 0.0              | (0.0)   |
| Total                            | 0.0              | (0.0)   |

V311\_Gn

## Cumulative Effect

|           | S4         | (S3)         |
|-----------|------------|--------------|
| Total     | 26209118.5 | (27489758.7) |
| Mean      | 19033.5    | (19963.5)    |
| Std. Dev. | 3821.7     | (4294.4)     |
| Min       | 9244.8     | (9263.4)     |
| Max       | 40136.3    | (42124.5)    |
| Area km²  | 86.01      |              |

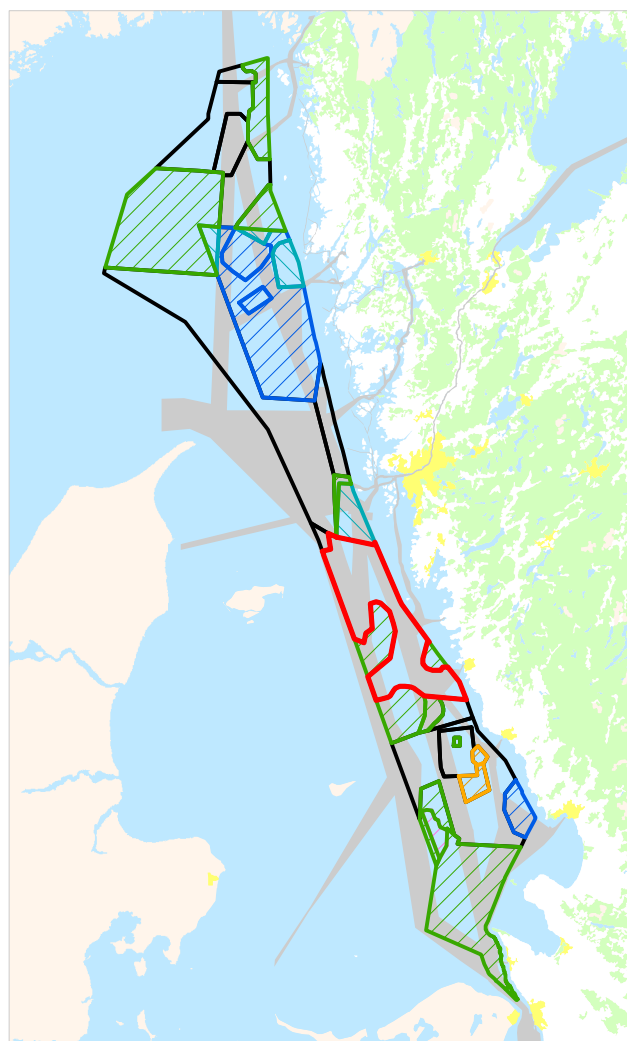
## Impacts Per Ecocomponent

| Name                    | % of Total<br>S4 | (S3)    |
|-------------------------|------------------|---------|
| Softbottom Aphotic      | 19.82            | (19.9)  |
| Spawning Fish           | 12.88            | (13.37) |
| Cod                     | 12.05            | (11.51) |
| Softbottom Photic       | 10.0             | (9.92)  |
| Plankton Community      | 8.65             | (8.25)  |
| Porpoise Northsea       | 8.2              | (8.59)  |
| Porpoise Beltsea        | 6.11             | (6.43)  |
| Harbour Seals           | 5.54             | (5.31)  |
| Eel Migration           | 3.76             | (3.59)  |
| Transportbottom Photic  | 3.11             | (3.13)  |
| Transportbottom Aphotic | 2.95             | (3.01)  |
| Sprat                   | 2.27             | (2.36)  |
| Hardbottom Photic       | 1.97             | (1.96)  |
| Herring                 | 0.8              | (0.82)  |
| Hardbottom Deep         | 0.63             | (0.64)  |
| Birds Coastal           | 0.63             | (0.6)   |
| Seabird Winter Offshore | 0.41             | (0.39)  |
| Mussel Reefs Total      | 0.11             | (0.11)  |
| Seabird Winter Coastal  | 0.08             | (0.08)  |
| Haploops Reef           | 0.03             | (0.03)  |
| Softbottom Deep         | 0.0              | (0.0)   |
| Shoreline Complexity    | 0.0              | (0.0)   |
| Angiosperms             | 0.0              | (0.0)   |
| Hardbottom Aphotic      | 0.0              | (0.0)   |
| Artificial Reefs Total  | 0.0              | (0.0)   |
| Deep Reef               | 0.0              | (0.0)   |
| Rivermouth Fish         | 0.0              | (0.0)   |
| Grey Seals              | 0.0              | (0.0)   |
| Transportbottom Deep    | 0.0              | (0.0)   |

Calculated with SyM

Date: 2018-03-22

Medins Havs och Vattenkonsulter AB



V312\_G

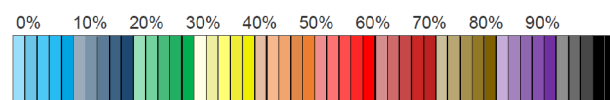
Miljöpåverkan i området jämfört med medelvärde för:

|                             |      |
|-----------------------------|------|
| S4 Västerhavet              | 120% |
| S4 Kattegatt                | 139% |
| S3 framtidsscenario år 2030 | 102% |

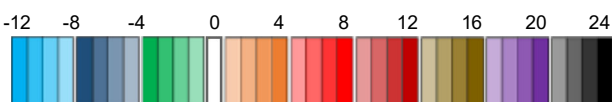
Områden och huvudanvändning



Procentuell andel av den högsta miljöpåverkan i Västerhavet, inklusive kustområden (S4)

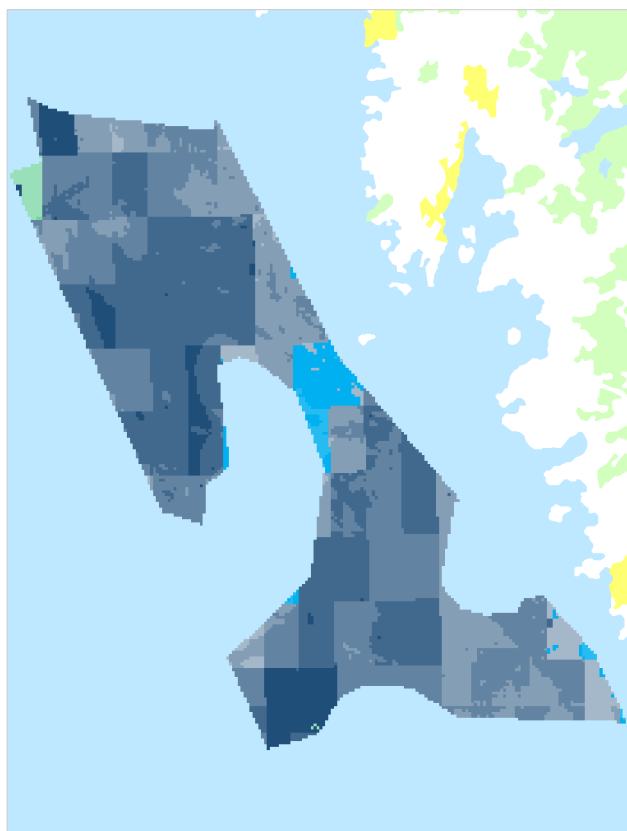


S4 plan 2030 - S3 Nollalternativ 2030.  
S4, S3 uttryckt som procentuell andel av den högsta miljöpåverkan i Västerhavet, inklusive kustområden.



S4 plan 2030

S4 plan 2030 - Nollalternativ 2030.



## Impacts Per Pressure

| Name                             | % of Total<br>S4 | (S3)    |
|----------------------------------|------------------|---------|
| Eutrophication                   |                  |         |
| Phosphorous Background           | 2.17             | (2.2)   |
| Anoxia Background                | 7.17             | (7.29)  |
| Nitrogen Background              | 17.44            | (17.73) |
| Total                            | 26.77            | (27.22) |
| General pollution                |                  |         |
| Tox Metal Background             | 1.31             | (1.33)  |
| Oilspill 2knots Wreck            | 0.0              | (0.0)   |
| Tox Synthetic Background         | 9.44             | (9.6)   |
| Tox Munition                     | 0.0              | (0.0)   |
| Tox Mine Risk                    | 0.44             | (0.45)  |
| Total                            | 11.18            | (11.37) |
| Shipping                         |                  |         |
| Turbidity Shipping               | 0.01             | (0.01)  |
| Noise 2000Hz Shipping            | 0.01             | (0.01)  |
| Oilspill 2knots Shipping         | 2.38             | (2.42)  |
| Noise 125Hz Shipping             | 13.22            | (13.44) |
| Total                            | 15.61            | (15.87) |
| Coastal development              |                  |         |
| Tox Synthetic Treatmentplants    | 0.0              | (0.0)   |
| Habitatloss Dumping              | 0.02             | (0.02)  |
| Infrastructure                   | 0.0              | (0.0)   |
| Habitatloss Coastal Exploitation | 0.0              | (0.0)   |
| Total                            | 0.02             | (0.02)  |
| Recreational activities          |                  |         |
| Boating Pollution                | 0.01             | (0.01)  |
| Boating Noise                    | 0.0              | (0.0)   |
| Birdhunt                         | 0.01             | (0.01)  |
| Total                            | 0.01             | (0.01)  |
| Fisheries                        |                  |         |
| Abrasion Bottomtrawl             | 23.22            | (22.68) |
| Catch Gillnet                    | 0.12             | (0.12)  |
| Turbidity Bottom trawl           | 10.91            | (10.74) |
| Catch Bottom trawl               | 11.92            | (11.73) |
| Catch Pelagic trawl              | 0.19             | (0.19)  |
| Total                            | 46.37            | (45.46) |
| Industry                         |                  |         |
| Tox Synthetic Industry           | 0.0              | (0.0)   |
| Tox Synthetic Harbor             | 0.0              | (0.0)   |
| Total                            | 0.0              | (0.0)   |
| Mineral mining                   |                  |         |
| Turbidity Mining                 | 0.0              | (0.0)   |
| Habitat Loss Mining              | 0.0              | (0.0)   |
| Total                            | 0.0              | (0.0)   |
| Defence                          |                  |         |
| Tox Metal Military               | 0.0              | (0.0)   |
| Explosion SPL                    | 0.0              | (0.0)   |
| Explosion PM                     | 0.0              | (0.0)   |
| Total                            | 0.0              | (0.0)   |
| Aquaculture                      |                  |         |
| Habitatloss Musselfarming        | 0.0              | (0.0)   |
| Total                            | 0.0              | (0.0)   |
| Energy                           |                  |         |
| Avoidance Windpower              | 0.0              | (0.0)   |
| Noise 125Hz Windpower            | 0.0              | (0.0)   |
| EMF                              | 0.04             | (0.04)  |
| Total                            | 0.04             | (0.04)  |

V312\_G

## Cumulative Effect

|           | S4          | (S3)          |
|-----------|-------------|---------------|
| Total     | 459879317.2 | (452270610.3) |
| Mean      | 28854.3     | (28376.9)     |
| Std. Dev. | 4515.7      | (4508.3)      |
| Min       | 11962.9     | (11485.4)     |
| Max       | 42281.2     | (41788.1)     |
| Area km²  | 996.73      |               |

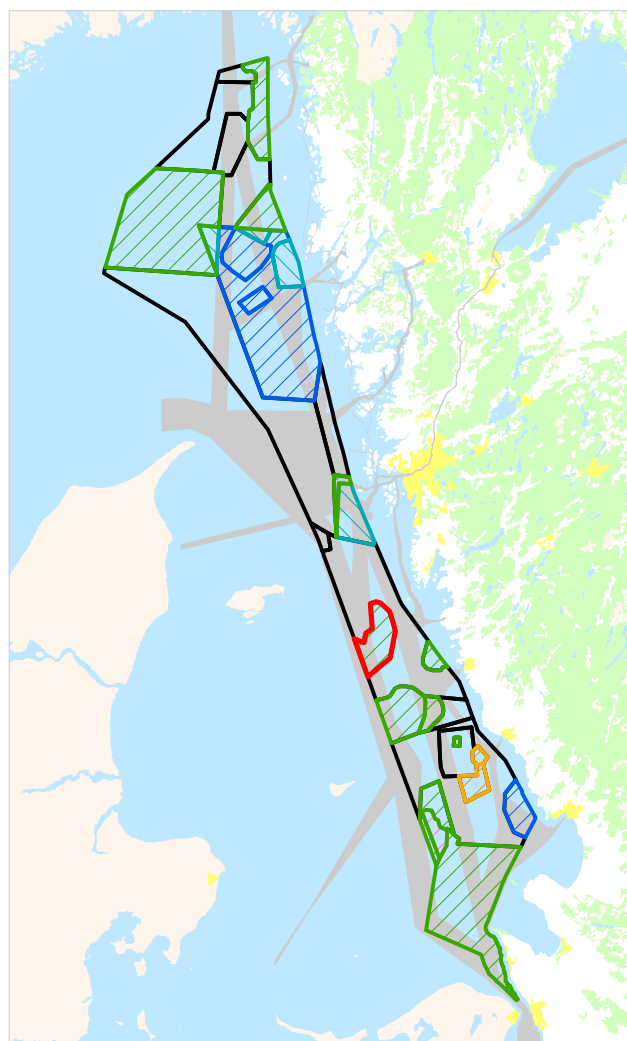
## Impacts Per Ecocomponent

| Name                    | % of Total<br>S4 | (S3)    |
|-------------------------|------------------|---------|
| Softbottom Aphotic      | 23.01            | (22.93) |
| Porpoise Northsea       | 12.74            | (12.77) |
| Cod                     | 10.07            | (10.07) |
| Softbottom Deep         | 10.05            | (10.03) |
| Spawning Fish           | 9.3              | (9.29)  |
| Plankton Community      | 8.64             | (8.69)  |
| Herring                 | 8.23             | (8.28)  |
| Harbour Seals           | 7.05             | (7.02)  |
| Sprat                   | 4.79             | (4.81)  |
| Transportbottom Aphotic | 2.28             | (2.25)  |
| Eel Migration           | 1.58             | (1.59)  |
| Softbottom Photic       | 0.93             | (0.92)  |
| Hardbottom Deep         | 0.35             | (0.34)  |
| Transportbottom Deep    | 0.3              | (0.3)   |
| Transportbottom Photic  | 0.22             | (0.22)  |
| Porpoise Beltsea        | 0.21             | (0.21)  |
| Hardbottom Photic       | 0.08             | (0.08)  |
| Hardbottom Aphotic      | 0.07             | (0.06)  |
| Birds Coastal           | 0.06             | (0.06)  |
| Seabird Winter Coastal  | 0.04             | (0.04)  |
| Artificial Reefs Total  | 0.01             | (0.01)  |
| Seabird Winter Offshore | 0.01             | (0.01)  |
| Mussel Reefs Total      | 0.01             | (0.01)  |
| Shoreline Complexity    | 0.0              | (0.0)   |
| Angiosperms             | 0.0              | (0.0)   |
| Haploops Reef           | 0.0              | (0.0)   |
| Deep Reef               | 0.0              | (0.0)   |
| Rivermouth Fish         | 0.0              | (0.0)   |
| Grey Seals              | 0.0              | (0.0)   |

Calculated with SyM

Date: 2018-03-22

Medins Havs och Vattenkonsulter AB



V313\_N

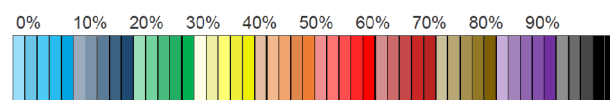
Miljöpåverkan i området jämfört med medelvärde för:

|                             |      |
|-----------------------------|------|
| S4 Västerhavet              | 70%  |
| S4 Kattegatt                | 80%  |
| S3 framtidsscenario år 2030 | 100% |

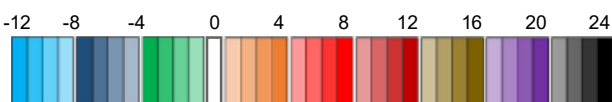
Områden och huvudanvändning



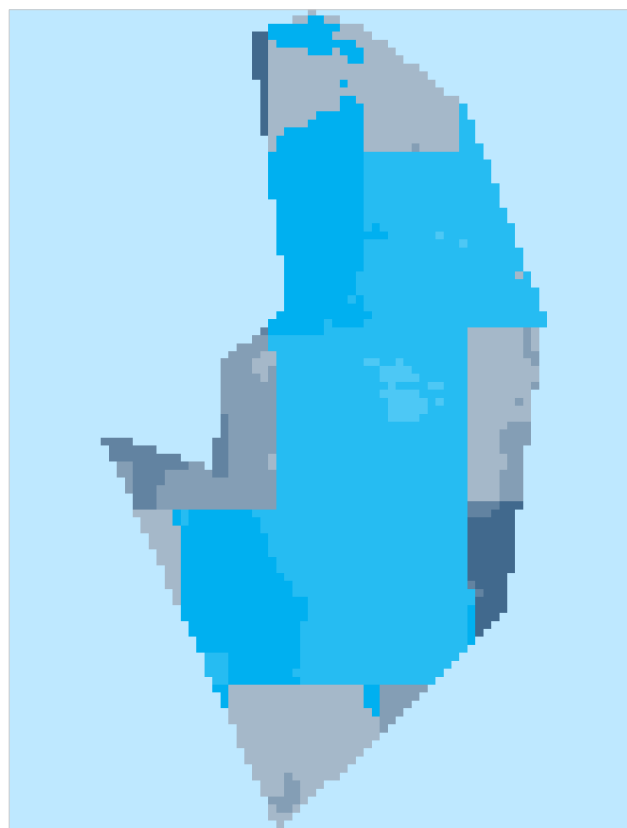
Procentuell andel av den högsta miljöpåverkan i Västerhavet, inklusive kustområden (S4)



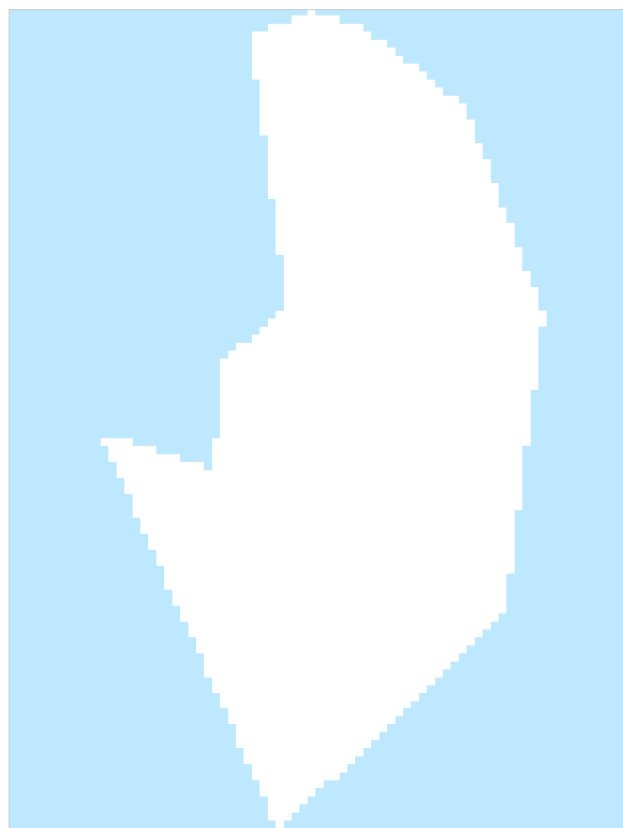
S4 plan 2030 - S3 Nollalternativ 2030.  
S4, S3 uttryckt som procentuell andel av den högsta miljöpåverkan i Västerhavet, inklusive kustområden.



S4 plan 2030



S4 plan 2030 - Nollalternativ 2030.



## Impacts Per Pressure

| Name                             | % of Total<br>S4 | (S3)    |
|----------------------------------|------------------|---------|
| Eutrophication                   |                  |         |
| Phosphorous Background           | 3.41             | (3.41)  |
| Anoxia Background                | 7.86             | (7.86)  |
| Nitrogen Background              | 28.86            | (28.86) |
| Total                            | 40.12            | (40.12) |
| General pollution                |                  |         |
| Tox Metal Background             | 0.78             | (0.78)  |
| Oilspill 2knots Wreck            | 0.0              | (0.0)   |
| Tox Synthetic Background         | 7.72             | (7.72)  |
| Tox Munition                     | 0.0              | (0.0)   |
| Tox Mine Risk                    | 0.06             | (0.06)  |
| Total                            | 8.56             | (8.56)  |
| Shipping                         |                  |         |
| Turbidity Shipping               | 0.25             | (0.25)  |
| Noise 2000Hz Shipping            | 0.04             | (0.04)  |
| Oilspill 2knots Shipping         | 3.67             | (3.67)  |
| Noise 125Hz Shipping             | 26.36            | (26.36) |
| Total                            | 30.33            | (30.33) |
| Coastal development              |                  |         |
| Tox Synthetic Treatmentplants    | 0.0              | (0.0)   |
| Habitatloss Dumping              | 0.0              | (0.0)   |
| Infrastructure                   | 0.01             | (0.01)  |
| Habitatloss Coastal Exploitation | 0.0              | (0.0)   |
| Total                            | 0.01             | (0.01)  |
| Recreational activities          |                  |         |
| Boating Pollution                | 0.0              | (0.0)   |
| Boating Noise                    | 0.0              | (0.0)   |
| Birdhunt                         | 0.04             | (0.04)  |
| Total                            | 0.04             | (0.04)  |
| Fisheries                        |                  |         |
| Abrasion Bottomtrawl             | 11.23            | (11.23) |
| Catch Gillnet                    | 0.18             | (0.18)  |
| Turbidity Bottom trawl           | 4.08             | (4.08)  |
| Catch Bottom trawl               | 4.97             | (4.97)  |
| Catch Pelagic trawl              | 0.49             | (0.49)  |
| Total                            | 20.95            | (20.95) |
| Industry                         |                  |         |
| Tox Synthetic Industry           | 0.0              | (0.0)   |
| Tox Synthetic Harbor             | 0.0              | (0.0)   |
| Total                            | 0.0              | (0.0)   |
| Mineral mining                   |                  |         |
| Turbidity Mining                 | 0.0              | (0.0)   |
| Habitat Loss Mining              | 0.0              | (0.0)   |
| Total                            | 0.0              | (0.0)   |
| Defence                          |                  |         |
| Tox Metal Military               | 0.0              | (0.0)   |
| Explosion SPL                    | 0.0              | (0.0)   |
| Explosion PM                     | 0.0              | (0.0)   |
| Total                            | 0.0              | (0.0)   |
| Aquaculture                      |                  |         |
| Habitatloss Mussel farming       | 0.0              | (0.0)   |
| Total                            | 0.0              | (0.0)   |
| Energy                           |                  |         |
| Avoidance Windpower              | 0.0              | (0.0)   |
| Noise 125Hz Windpower            | 0.0              | (0.0)   |
| EMF                              | 0.0              | (0.0)   |
| Total                            | 0.0              | (0.0)   |

V313\_N

## Cumulative Effect

|           | S4         | (S3)         |
|-----------|------------|--------------|
| Total     | 52465173.0 | (52465173.0) |
| Mean      | 16719.3    | (16719.3)    |
| Std. Dev. | 5054.5     | (5054.5)     |
| Min       | 10257.9    | (10257.9)    |
| Max       | 33109.4    | (33109.4)    |
| Area km²  | 195.77     |              |

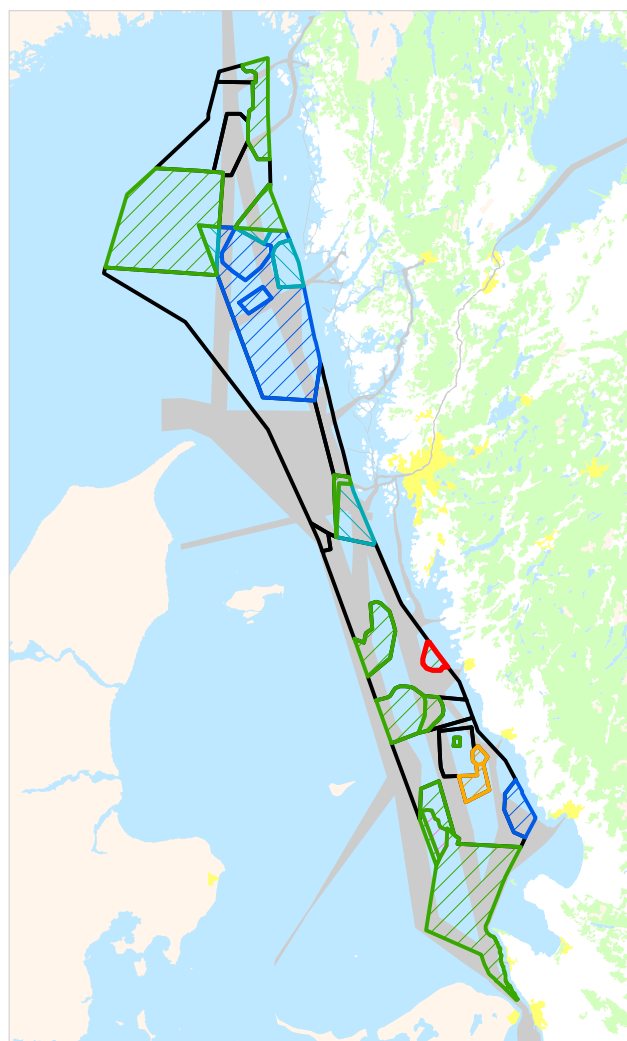
## Impacts Per Ecocomponent

| Name                    | % of Total<br>S4 | (S3)    |
|-------------------------|------------------|---------|
| Porpoise Northsea       | 13.27            | (13.27) |
| Softbottom Aphotic      | 12.81            | (12.81) |
| Cod                     | 12.01            | (12.01) |
| Spawning Fish           | 11.72            | (11.72) |
| Herring                 | 11.01            | (11.01) |
| Plankton Community      | 8.08             | (8.08)  |
| Transportbottom Photic  | 6.16             | (6.16)  |
| Transportbottom Aphotic | 6.11             | (6.11)  |
| Harbour Seals           | 6.08             | (6.08)  |
| Sprat                   | 5.34             | (5.34)  |
| Softbottom Photic       | 3.31             | (3.31)  |
| Hardbottom Photic       | 1.7              | (1.7)   |
| Hardbottom Deep         | 0.83             | (0.83)  |
| Eel Migration           | 0.81             | (0.81)  |
| Seabird Winter Offshore | 0.6              | (0.6)   |
| Mussel Reefs Total      | 0.06             | (0.06)  |
| Softbottom Deep         | 0.05             | (0.05)  |
| Birds Coastal           | 0.05             | (0.05)  |
| Transportbottom Deep    | 0.0              | (0.0)   |
| Artificial Reefs Total  | 0.0              | (0.0)   |
| Hardbottom Aphotic      | 0.0              | (0.0)   |
| Angiosperms             | 0.0              | (0.0)   |
| Shoreline Complexity    | 0.0              | (0.0)   |
| Haploops Reef           | 0.0              | (0.0)   |
| Rivermouth Fish         | 0.0              | (0.0)   |
| Deep Reef               | 0.0              | (0.0)   |
| Grey Seals              | 0.0              | (0.0)   |
| Seabird Winter Coastal  | 0.0              | (0.0)   |
| Porpoise Beltsea        | 0.0              | (0.0)   |

Calculated with SyM

Date: 2018-03-22

Medins Havs och Vattenkonsulter AB



V314\_N

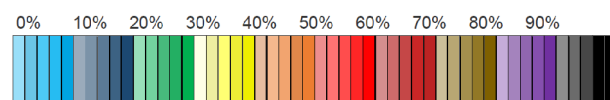
Miljöpåverkan i området jämfört med medelvärde för:

|                             |      |
|-----------------------------|------|
| S4 Västerhavet              | 94%  |
| S4 Kattegatt                | 108% |
| S3 framtidsscenario år 2030 | 100% |

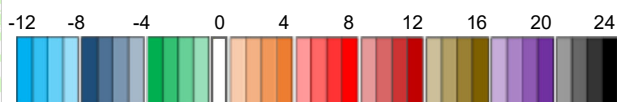
Områden och huvudanvändning



Procentuell andel av den högsta miljöpåverkan i Västerhavet, inklusive kustområden (S4)

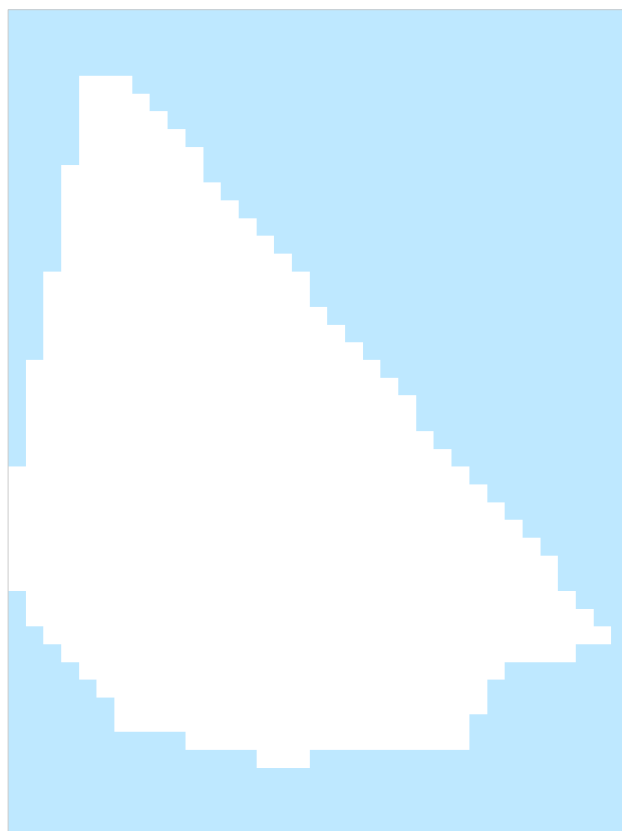
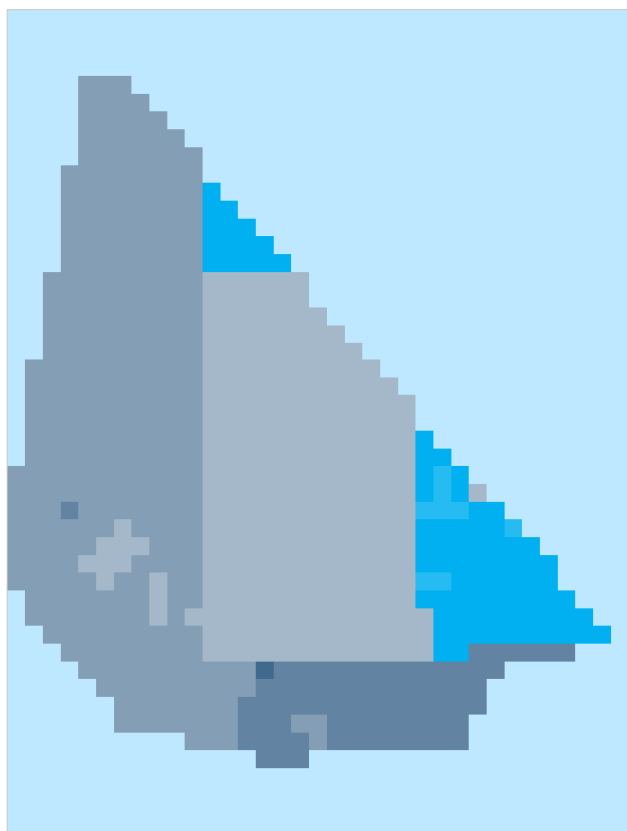


S4 plan 2030 - S3 Nollalternativ 2030.  
S4, S3 uttryckt som procentuell andel av den högsta miljöpåverkan i Västerhavet, inklusive kustområden.



S4 plan 2030

S4 plan 2030 - Nollalternativ 2030.



## Impacts Per Pressure

| Name                             | % of Total<br>S4 | (S3)    |
|----------------------------------|------------------|---------|
| Eutrophication                   |                  |         |
| Phosphorous Background           | 2.93             | (2.93)  |
| Anoxia Background                | 5.13             | (5.13)  |
| Nitrogen Background              | 20.45            | (20.45) |
| Total                            | 28.51            | (28.51) |
| General pollution                |                  |         |
| Tox Metal Background             | 2.57             | (2.57)  |
| Oilspill 2knots Wreck            | 0.0              | (0.0)   |
| Tox Synthetic Background         | 8.92             | (8.92)  |
| Tox Munition                     | 0.0              | (0.0)   |
| Tox Mine Risk                    | 0.0              | (0.0)   |
| Total                            | 11.49            | (11.49) |
| Shipping                         |                  |         |
| Turbidity Shipping               | 0.0              | (0.0)   |
| Noise 2000Hz Shipping            | 0.0              | (0.0)   |
| Oilspill 2knots Shipping         | 1.92             | (1.92)  |
| Noise 125Hz Shipping             | 14.39            | (14.39) |
| Total                            | 16.31            | (16.31) |
| Coastal development              |                  |         |
| Tox Synthetic Treatmentplants    | 0.0              | (0.0)   |
| Habitatloss Dumping              | 0.0              | (0.0)   |
| Infrastructure                   | 0.0              | (0.0)   |
| Habitatloss Coastal Exploitation | 0.0              | (0.0)   |
| Total                            | 0.0              | (0.0)   |
| Recreational activities          |                  |         |
| Boating Pollution                | 0.02             | (0.02)  |
| Boating Noise                    | 0.01             | (0.01)  |
| Birdhunt                         | 0.02             | (0.02)  |
| Total                            | 0.05             | (0.05)  |
| Fisheries                        |                  |         |
| Abrasion Bottomtrawl             | 23.44            | (23.44) |
| Catch Gillnet                    | 0.0              | (0.0)   |
| Turbidity Bottom trawl           | 9.73             | (9.73)  |
| Catch Bottom trawl               | 10.47            | (10.47) |
| Catch Pelagic trawl              | 0.0              | (0.0)   |
| Total                            | 43.64            | (43.64) |
| Industry                         |                  |         |
| Tox Synthetic Industry           | 0.0              | (0.0)   |
| Tox Synthetic Harbor             | 0.0              | (0.0)   |
| Total                            | 0.0              | (0.0)   |
| Mineral mining                   |                  |         |
| Turbidity Mining                 | 0.0              | (0.0)   |
| Habitat Loss Mining              | 0.0              | (0.0)   |
| Total                            | 0.0              | (0.0)   |
| Defence                          |                  |         |
| Tox Metal Military               | 0.0              | (0.0)   |
| Explosion SPL                    | 0.0              | (0.0)   |
| Explosion PM                     | 0.0              | (0.0)   |
| Total                            | 0.0              | (0.0)   |
| Aquaculture                      |                  |         |
| Habitatloss Mussel farming       | 0.0              | (0.0)   |
| Total                            | 0.0              | (0.0)   |
| Energy                           |                  |         |
| Avoidance Windpower              | 0.0              | (0.0)   |
| Noise 125Hz Windpower            | 0.0              | (0.0)   |
| EMF                              | 0.0              | (0.0)   |
| Total                            | 0.0              | (0.0)   |

V314\_N

## Cumulative Effect

|           | S4         | (S3)         |
|-----------|------------|--------------|
| Total     | 16516080.1 | (16516080.1) |
| Mean      | 22532.2    | (22532.2)    |
| Std. Dev. | 3268.0     | (3268.0)     |
| Min       | 14231.3    | (14231.3)    |
| Max       | 30439.0    | (30439.0)    |
| Area km²  | 45.82      |              |

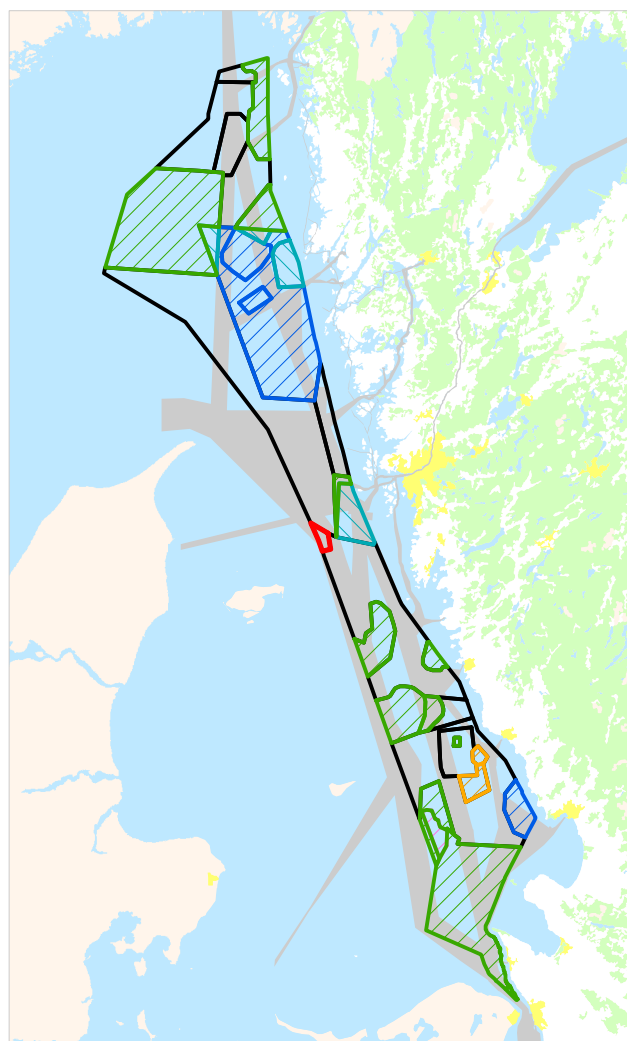
## Impacts Per Ecocomponent

| Name                    | % of Total<br>S4 | (S3)    |
|-------------------------|------------------|---------|
| Softbottom Aphotic      | 28.65            | (28.65) |
| Spawning Fish           | 14.56            | (14.56) |
| Porpoise Northsea       | 14.42            | (14.42) |
| Plankton Community      | 9.23             | (9.23)  |
| Harbour Seals           | 8.24             | (8.24)  |
| Softbottom Photic       | 6.85             | (6.85)  |
| Eel Migration           | 4.46             | (4.46)  |
| Sprat                   | 4.4              | (4.4)   |
| Herring                 | 3.2              | (3.2)   |
| Transportbottom Aphotic | 2.53             | (2.53)  |
| Transportbottom Photic  | 1.36             | (1.36)  |
| Hardbottom Photic       | 1.03             | (1.03)  |
| Hardbottom Deep         | 0.5              | (0.5)   |
| Birds Coastal           | 0.35             | (0.35)  |
| Seabird Winter Offshore | 0.14             | (0.14)  |
| Mussel Reefs Total      | 0.04             | (0.04)  |
| Artificial Reefs Total  | 0.04             | (0.04)  |
| Cod                     | 0.0              | (0.0)   |
| Seabird Winter Coastal  | 0.0              | (0.0)   |
| Rivermouth Fish         | 0.0              | (0.0)   |
| Porpoise Beltsea        | 0.0              | (0.0)   |
| Angiosperms             | 0.0              | (0.0)   |
| Shoreline Complexity    | 0.0              | (0.0)   |
| Softbottom Deep         | 0.0              | (0.0)   |
| Hardbottom Aphotic      | 0.0              | (0.0)   |
| Haploops Reef           | 0.0              | (0.0)   |
| Deep Reef               | 0.0              | (0.0)   |
| Grey Seals              | 0.0              | (0.0)   |
| Transportbottom Deep    | 0.0              | (0.0)   |

Calculated with SyM

Date: 2018-03-22

Medins Havs och Vattenkonsulter AB



V315\_Gn

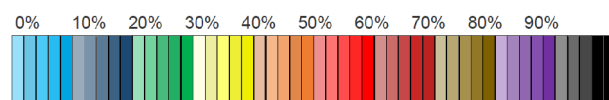
Miljöpåverkan i området jämfört med medelvärde för:

|                             |      |
|-----------------------------|------|
| S4 Västerhavet              | 117% |
| S4 Kattegatt                | 135% |
| S3 framtidsscenario år 2030 | 94%  |

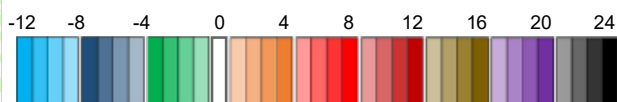
Områden och huvudanvändning



Procentuell andel av den högsta miljöpåverkan i Västerhavet, inklusive kustområden (S4)

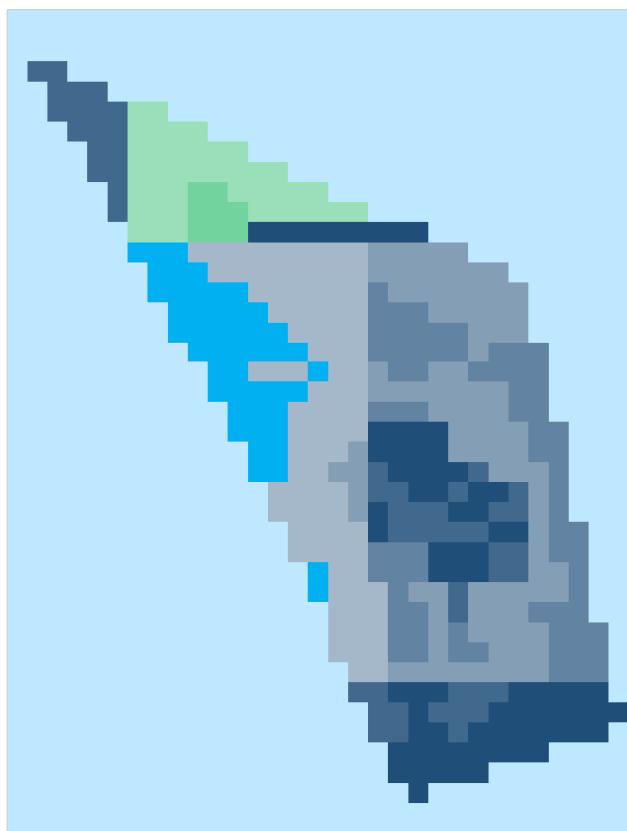


S4 plan 2030 - S3 Nollalternativ 2030.  
S4, S3 uttryckt som procentuell andel av den högsta miljöpåverkan i Västerhavet, inklusive kustområden.



S4 plan 2030

S4 plan 2030 - Nollalternativ 2030.



## Impacts Per Pressure

| Name                             | % of Total<br>S4 | (S3)    |
|----------------------------------|------------------|---------|
| Eutrophication                   |                  |         |
| Phosphorous Background           | 2.28             | (2.13)  |
| Anoxia Background                | 0.98             | (0.92)  |
| Nitrogen Background              | 18.73            | (17.54) |
| Total                            | 21.98            | (20.59) |
| General pollution                |                  |         |
| Tox Metal Background             | 0.0              | (0.0)   |
| Oilspill 2knots Wreck            | 0.0              | (0.0)   |
| Tox Synthetic Background         | 3.42             | (3.2)   |
| Tox Munition                     | 0.0              | (0.0)   |
| Tox Mine Risk                    | 2.37             | (2.22)  |
| Total                            | 5.79             | (5.42)  |
| Shipping                         |                  |         |
| Turbidity Shipping               | 0.48             | (0.45)  |
| Noise 2000Hz Shipping            | 0.13             | (0.12)  |
| Oilspill 2knots Shipping         | 3.55             | (3.32)  |
| Noise 125Hz Shipping             | 20.84            | (19.52) |
| Total                            | 24.99            | (23.4)  |
| Coastal development              |                  |         |
| Tox Synthetic Treatmentplants    | 0.0              | (0.0)   |
| Habitatloss Dumping              | 0.0              | (0.0)   |
| Infrastructure                   | 0.0              | (0.0)   |
| Habitatloss Coastal Exploitation | 0.0              | (0.0)   |
| Total                            | 0.0              | (0.0)   |
| Recreational activities          |                  |         |
| Boating Pollution                | 0.0              | (0.0)   |
| Boating Noise                    | 0.0              | (0.0)   |
| Birdhunt                         | 0.0              | (0.0)   |
| Total                            | 0.0              | (0.0)   |
| Fisheries                        |                  |         |
| Abrasion Bottomtrawl             | 25.42            | (23.87) |
| Catch Gillnet                    | 0.0              | (0.0)   |
| Turbidity Bottom trawl           | 13.43            | (12.6)  |
| Catch Bottom trawl               | 8.34             | (14.07) |
| Catch Pelagic trawl              | 0.04             | (0.06)  |
| Total                            | 47.23            | (50.59) |
| Industry                         |                  |         |
| Tox Synthetic Industry           | 0.0              | (0.0)   |
| Tox Synthetic Harbor             | 0.0              | (0.0)   |
| Total                            | 0.0              | (0.0)   |
| Mineral mining                   |                  |         |
| Turbidity Mining                 | 0.0              | (0.0)   |
| Habitat Loss Mining              | 0.0              | (0.0)   |
| Total                            | 0.0              | (0.0)   |
| Defence                          |                  |         |
| Tox Metal Military               | 0.0              | (0.0)   |
| Explosion SPL                    | 0.0              | (0.0)   |
| Explosion PM                     | 0.0              | (0.0)   |
| Total                            | 0.0              | (0.0)   |
| Aquaculture                      |                  |         |
| Habitatloss Mussel farming       | 0.0              | (0.0)   |
| Total                            | 0.0              | (0.0)   |
| Energy                           |                  |         |
| Avoidance Windpower              | 0.0              | (0.0)   |
| Noise 125Hz Windpower            | 0.0              | (0.0)   |
| EMF                              | 0.0              | (0.0)   |
| Total                            | 0.0              | (0.0)   |

V315\_Gn

## Cumulative Effect

|           | S4         | (S3)         |
|-----------|------------|--------------|
| Total     | 13350646.2 | (14257023.4) |
| Mean      | 28047.6    | (29951.7)    |
| Std. Dev. | 7390.6     | (8475.4)     |
| Min       | 15906.1    | (16470.7)    |
| Max       | 42455.8    | (46742.8)    |
| Area km²  | 29.85      |              |

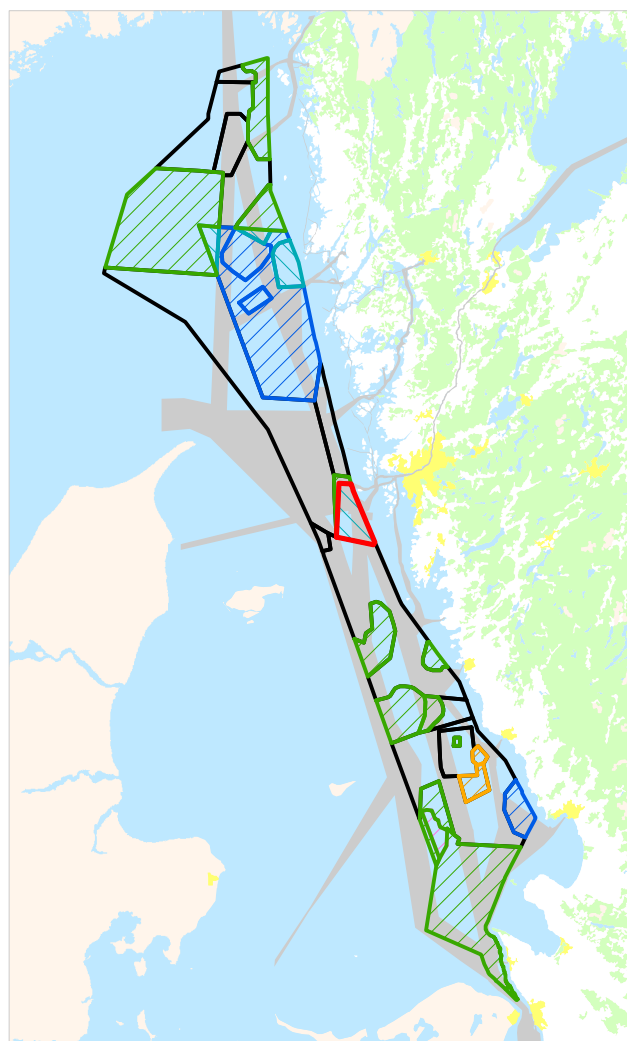
## Impacts Per Ecocomponent

| Name                    | % of Total<br>S4 | (S3)    |
|-------------------------|------------------|---------|
| Softbottom Aphotic      | 18.31            | (18.43) |
| Porpoise Northsea       | 12.92            | (13.73) |
| Cod                     | 12.23            | (11.47) |
| Herring                 | 9.65             | (9.89)  |
| Plankton Community      | 9.25             | (8.66)  |
| Spawning Fish           | 8.86             | (9.33)  |
| Harbour Seals           | 7.41             | (6.95)  |
| Transportbottom Aphotic | 5.89             | (5.98)  |
| Sprat                   | 5.76             | (6.05)  |
| Deep Reef               | 3.16             | (2.97)  |
| Transportbottom Photic  | 1.94             | (1.98)  |
| Hardbottom Deep         | 1.68             | (1.68)  |
| Hardbottom Photic       | 0.98             | (0.96)  |
| Softbottom Photic       | 0.93             | (0.92)  |
| Softbottom Deep         | 0.85             | (0.84)  |
| Mussel Reefs Total      | 0.1              | (0.09)  |
| Artificial Reefs Total  | 0.05             | (0.04)  |
| Transportbottom Deep    | 0.04             | (0.04)  |
| Hardbottom Aphotic      | 0.0              | (0.0)   |
| Birds Coastal           | 0.0              | (0.0)   |
| Eel Migration           | 0.0              | (0.0)   |
| Rivermouth Fish         | 0.0              | (0.0)   |
| Seabird Winter Coastal  | 0.0              | (0.0)   |
| Porpoise Beltsea        | 0.0              | (0.0)   |
| Angiosperms             | 0.0              | (0.0)   |
| Shoreline Complexity    | 0.0              | (0.0)   |
| Haploops Reef           | 0.0              | (0.0)   |
| Grey Seals              | 0.0              | (0.0)   |
| Seabird Winter Offshore | 0.0              | (0.0)   |

Calculated with SyM

Date: 2018-03-22

Medins Havs och Vattenkonsulter AB



V330\_FN

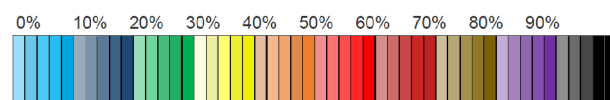
Miljöpåverkan i området jämfört med medelvärde för:

|                             |      |
|-----------------------------|------|
| S4 Västerhavet              | 118% |
| S4 Skagerrak                | 108% |
| S3 framtidsscenario år 2030 | 100% |

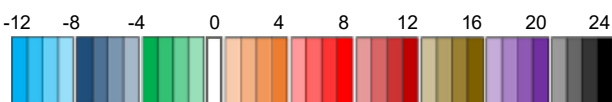
Områden och huvudanvändning



Procentuell andel av den högsta miljöpåverkan i Västerhavet, inklusive kustområden (S4)

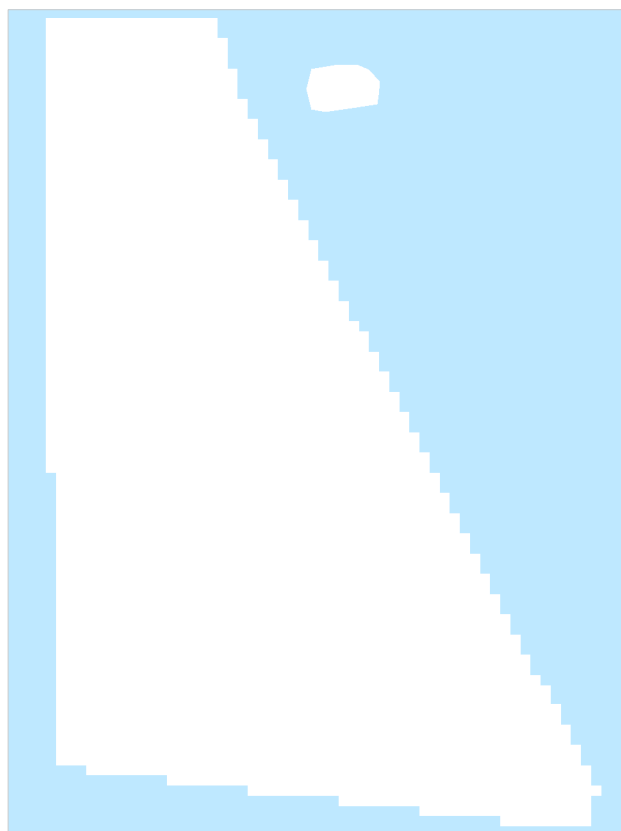
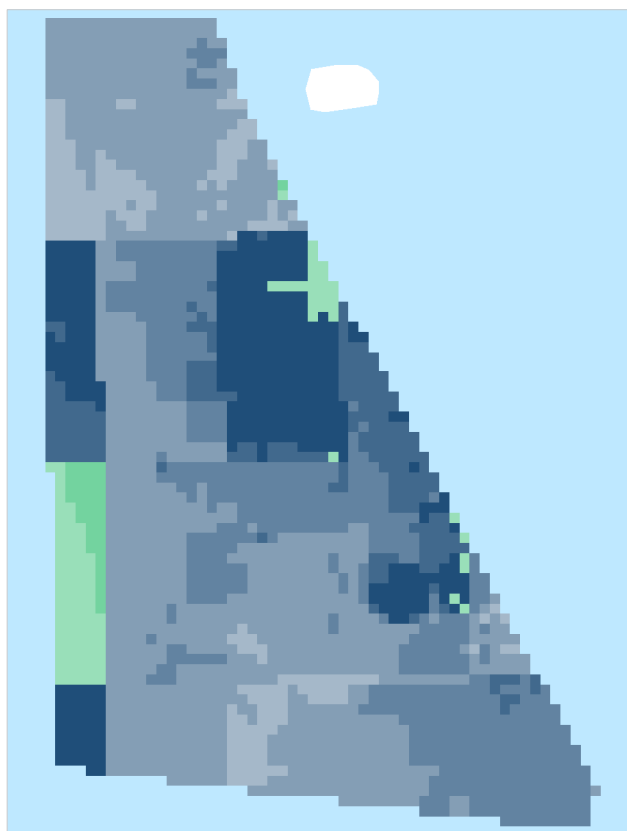


S4 plan 2030 - S3 Nollalternativ 2030.  
S4, S3 uttryckt som procentuell andel av den högsta miljöpåverkan i Västerhavet, inklusive kustområden.



S4 plan 2030

S4 plan 2030 - Nollalternativ 2030.



## Impacts Per Pressure

| Name                             | % of Total<br>S4 | (S3)    |
|----------------------------------|------------------|---------|
| Eutrophication                   |                  |         |
| Phosphorous Background           | 2.36             | (2.36)  |
| Anoxia Background                | 3.79             | (3.79)  |
| Nitrogen Background              | 19.64            | (19.64) |
| Total                            | 25.79            | (25.79) |
| General pollution                |                  |         |
| Tox Metal Background             | 0.0              | (0.0)   |
| Oilspill 2knots Wreck            | 0.0              | (0.0)   |
| Tox Synthetic Background         | 9.25             | (9.25)  |
| Tox Munition                     | 0.0              | (0.0)   |
| Tox Mine Risk                    | 1.45             | (1.45)  |
| Total                            | 10.7             | (10.7)  |
| Shipping                         |                  |         |
| Turbidity Shipping               | 0.01             | (0.01)  |
| Noise 2000Hz Shipping            | 0.17             | (0.17)  |
| Oilspill 2knots Shipping         | 3.53             | (3.53)  |
| Noise 125Hz Shipping             | 23.31            | (23.31) |
| Total                            | 27.03            | (27.03) |
| Coastal development              |                  |         |
| Tox Synthetic Treatmentplants    | 0.0              | (0.0)   |
| Habitatloss Dumping              | 0.05             | (0.05)  |
| Infrastructure                   | 0.0              | (0.0)   |
| Habitatloss Coastal Exploitation | 0.0              | (0.0)   |
| Total                            | 0.05             | (0.05)  |
| Recreational activities          |                  |         |
| Boating Pollution                | 0.06             | (0.06)  |
| Boating Noise                    | 0.02             | (0.02)  |
| Birdhunt                         | 0.03             | (0.03)  |
| Total                            | 0.11             | (0.11)  |
| Fisheries                        |                  |         |
| Abrasion Bottomtrawl             | 16.96            | (16.96) |
| Catch Gillnet                    | 0.15             | (0.15)  |
| Turbidity Bottom trawl           | 7.58             | (7.58)  |
| Catch Bottom trawl               | 7.95             | (7.95)  |
| Catch Pelagic trawl              | 3.15             | (3.15)  |
| Total                            | 35.8             | (35.8)  |
| Industry                         |                  |         |
| Tox Synthetic Industry           | 0.0              | (0.0)   |
| Tox Synthetic Harbor             | 0.0              | (0.0)   |
| Total                            | 0.0              | (0.0)   |
| Mineral mining                   |                  |         |
| Turbidity Mining                 | 0.0              | (0.0)   |
| Habitat Loss Mining              | 0.0              | (0.0)   |
| Total                            | 0.0              | (0.0)   |
| Defence                          |                  |         |
| Tox Metal Military               | 0.0              | (0.0)   |
| Explosion SPL                    | 0.41             | (0.41)  |
| Explosion PM                     | 0.0              | (0.0)   |
| Total                            | 0.41             | (0.41)  |
| Aquaculture                      |                  |         |
| Habitatloss Mussel farming       | 0.0              | (0.0)   |
| Total                            | 0.0              | (0.0)   |
| Energy                           |                  |         |
| Avoidance Windpower              | 0.0              | (0.0)   |
| Noise 125Hz Windpower            | 0.0              | (0.0)   |
| EMF                              | 0.1              | (0.1)   |
| Total                            | 0.1              | (0.1)   |

V330\_FN

## Cumulative Effect

|           | S4         | (S3)         |
|-----------|------------|--------------|
| Total     | 76240639.4 | (76240639.4) |
| Mean      | 28279.2    | (28279.2)    |
| Std. Dev. | 5304.9     | (5304.9)     |
| Min       | 19815.8    | (19815.8)    |
| Max       | 43035.8    | (43035.8)    |
| Area km²  | 168.91     |              |

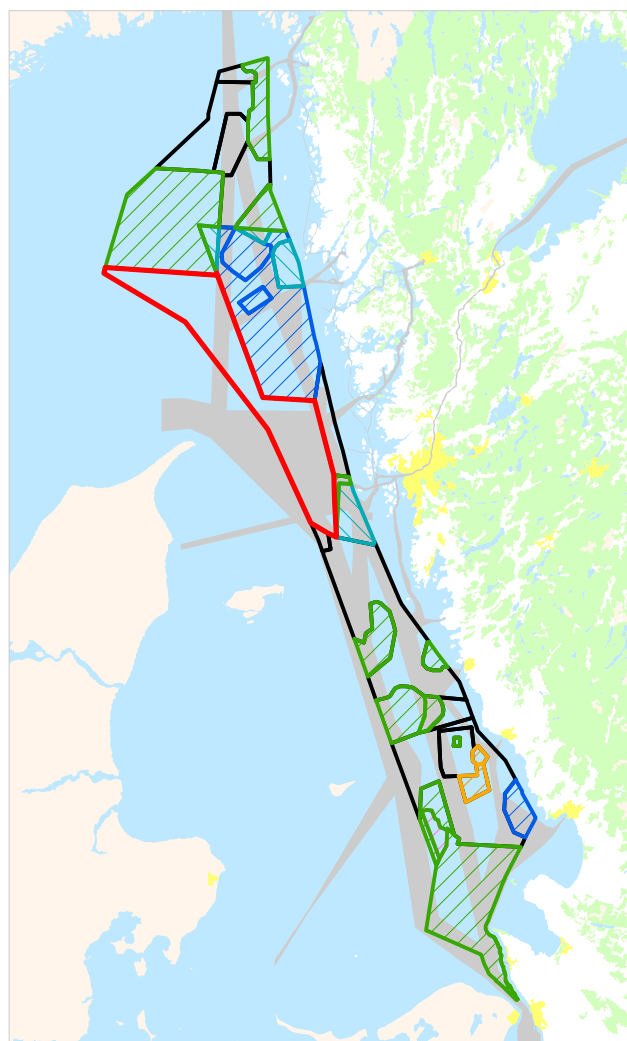
## Impacts Per Ecocomponent

| Name                    | % of Total<br>S4 | (S3)    |
|-------------------------|------------------|---------|
| Softbottom Aphotic      | 13.47            | (13.47) |
| Porpoise Northsea       | 12.91            | (12.91) |
| Cod                     | 12.7             | (12.7)  |
| Softbottom Deep         | 12.01            | (12.01) |
| Herring                 | 11.77            | (11.77) |
| Sprat                   | 9.04             | (9.04)  |
| Plankton Community      | 7.79             | (7.79)  |
| Harbour Seals           | 7.41             | (7.41)  |
| Spawning Fish           | 7.14             | (7.14)  |
| Transportbottom Aphotic | 1.5              | (1.5)   |
| Eel Migration           | 1.37             | (1.37)  |
| Transportbottom Deep    | 0.68             | (0.68)  |
| Mussel Reefs Total      | 0.51             | (0.51)  |
| Deep Reef               | 0.5              | (0.5)   |
| Hardbottom Deep         | 0.44             | (0.44)  |
| Hardbottom Aphotic      | 0.35             | (0.35)  |
| Seabird Winter Coastal  | 0.14             | (0.14)  |
| Transportbottom Photic  | 0.12             | (0.12)  |
| Softbottom Photic       | 0.06             | (0.06)  |
| Hardbottom Photic       | 0.06             | (0.06)  |
| Artificial Reefs Total  | 0.01             | (0.01)  |
| Birds Coastal           | 0.01             | (0.01)  |
| Rivermouth Fish         | 0.0              | (0.0)   |
| Porpoise Beltsea        | 0.0              | (0.0)   |
| Angiosperms             | 0.0              | (0.0)   |
| Shoreline Complexity    | 0.0              | (0.0)   |
| Haploops Reef           | 0.0              | (0.0)   |
| Grey Seals              | 0.0              | (0.0)   |
| Seabird Winter Offshore | 0.0              | (0.0)   |

Calculated with SyM

Date: 2018-03-22

Medins Havs och Vattenkonsulter AB



V331\_G

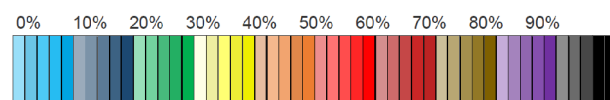
Miljöpåverkan i området jämfört med medelvärde för:

|                             |      |
|-----------------------------|------|
| S4 Västerhavet              | 139% |
| S4 Skagerrak                | 127% |
| S3 framtidsscenario år 2030 | 100% |

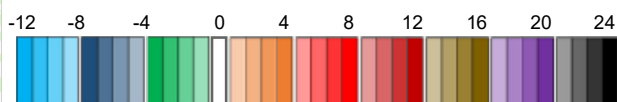
Områden och huvudanvändning



Procentuell andel av den högsta miljöpåverkan i Västerhavet, inklusive kustområden (S4)

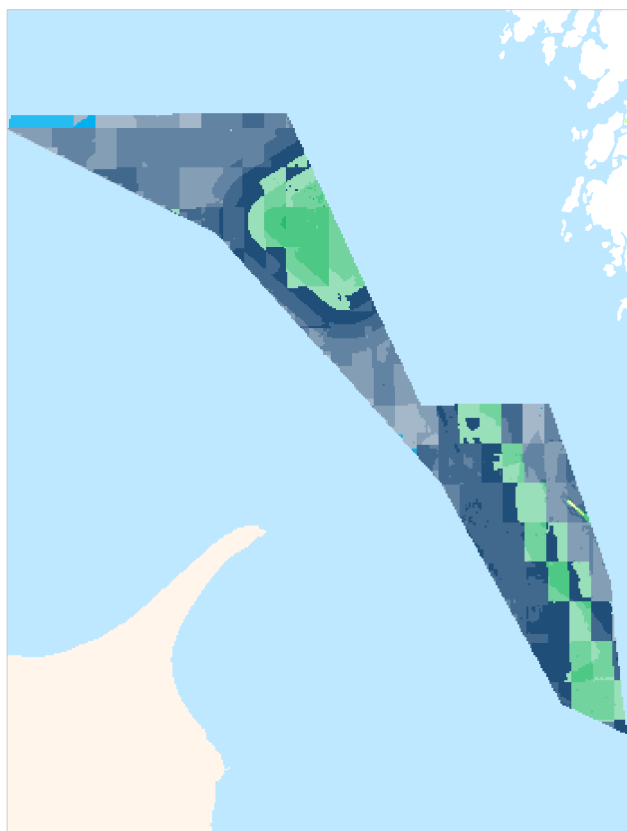


S4 plan 2030 - S3 Nollalternativ 2030.  
S4, S3 uttryckt som procentuell andel av den högsta miljöpåverkan i Västerhavet, inklusive kustområden.



S4 plan 2030

S4 plan 2030 - Nollalternativ 2030.



## Impacts Per Pressure

| Name                             | % of Total<br>S4 | (S3)    |
|----------------------------------|------------------|---------|
| Eutrophication                   |                  |         |
| Phosphorous Background           | 1.58             | (1.58)  |
| Anoxia Background                | 0.25             | (0.25)  |
| Nitrogen Background              | 16.15            | (16.15) |
| Total                            | 17.99            | (17.99) |
| General pollution                |                  |         |
| Tox Metal Background             | 1.31             | (1.31)  |
| Oilspill 2knots Wreck            | 0.0              | (0.0)   |
| Tox Synthetic Background         | 9.1              | (9.1)   |
| Tox Munition                     | 7.05             | (7.05)  |
| Tox Mine Risk                    | 0.44             | (0.44)  |
| Total                            | 17.9             | (17.9)  |
| Shipping                         |                  |         |
| Turbidity Shipping               | 0.01             | (0.01)  |
| Noise 2000Hz Shipping            | 0.0              | (0.0)   |
| Oilspill 2knots Shipping         | 1.93             | (1.93)  |
| Noise 125Hz Shipping             | 7.69             | (7.69)  |
| Total                            | 9.62             | (9.62)  |
| Coastal development              |                  |         |
| Tox Synthetic Treatmentplants    | 0.0              | (0.0)   |
| Habitatloss Dumping              | 0.0              | (0.0)   |
| Infrastructure                   | 0.0              | (0.0)   |
| Habitatloss Coastal Exploitation | 0.0              | (0.0)   |
| Total                            | 0.0              | (0.0)   |
| Recreational activities          |                  |         |
| Boating Pollution                | 0.1              | (0.1)   |
| Boating Noise                    | 0.04             | (0.04)  |
| Birdhunt                         | 0.0              | (0.0)   |
| Total                            | 0.14             | (0.14)  |
| Fisheries                        |                  |         |
| Abrasion Bottomtrawl             | 23.54            | (23.54) |
| Catch Gillnet                    | 0.79             | (0.79)  |
| Turbidity Bottom trawl           | 13.0             | (13.0)  |
| Catch Bottom trawl               | 15.81            | (15.81) |
| Catch Pelagic trawl              | 0.31             | (0.31)  |
| Total                            | 53.45            | (53.45) |
| Industry                         |                  |         |
| Tox Synthetic Industry           | 0.0              | (0.0)   |
| Tox Synthetic Harbor             | 0.0              | (0.0)   |
| Total                            | 0.0              | (0.0)   |
| Mineral mining                   |                  |         |
| Turbidity Mining                 | 0.0              | (0.0)   |
| Habitat Loss Mining              | 0.0              | (0.0)   |
| Total                            | 0.0              | (0.0)   |
| Defence                          |                  |         |
| Tox Metal Military               | 0.0              | (0.0)   |
| Explosion SPL                    | 0.9              | (0.9)   |
| Explosion PM                     | 0.0              | (0.0)   |
| Total                            | 0.9              | (0.9)   |
| Aquaculture                      |                  |         |
| Habitatloss Mussel farming       | 0.0              | (0.0)   |
| Total                            | 0.0              | (0.0)   |
| Energy                           |                  |         |
| Avoidance Windpower              | 0.0              | (0.0)   |
| Noise 125Hz Windpower            | 0.0              | (0.0)   |
| EMF                              | 0.0              | (0.0)   |
| Total                            | 0.0              | (0.0)   |

V331\_G

## Cumulative Effect

|           | S4          | (S3)          |
|-----------|-------------|---------------|
| Total     | 796258180.0 | (796258180.0) |
| Mean      | 33238.4     | (33238.4)     |
| Std. Dev. | 7425.5      | (7425.5)      |
| Min       | 11862.6     | (11862.6)     |
| Max       | 66814.7     | (66814.7)     |
| Area km²  | 1497.03     |               |

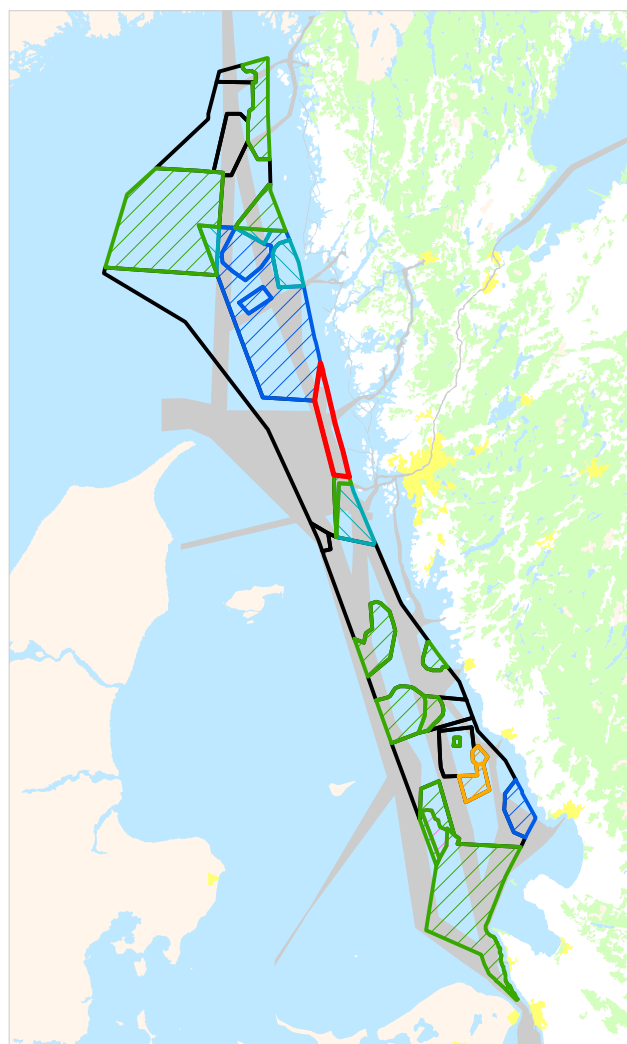
## Impacts Per Ecocomponent

| Name                    | % of Total<br>S4 | (S3)    |
|-------------------------|------------------|---------|
| Softbottom Deep         | 22.7             | (22.7)  |
| Cod                     | 13.86            | (13.86) |
| Spawning Fish           | 13.09            | (13.09) |
| Porpoise Northsea       | 12.29            | (12.29) |
| Herring                 | 10.35            | (10.35) |
| Softbottom Aphotic      | 9.29             | (9.29)  |
| Plankton Community      | 8.78             | (8.78)  |
| Sprat                   | 4.77             | (4.77)  |
| Harbour Seals           | 3.26             | (3.26)  |
| Transportbottom Aphotic | 0.96             | (0.96)  |
| Transportbottom Deep    | 0.35             | (0.35)  |
| Hardbottom Deep         | 0.18             | (0.18)  |
| Eel Migration           | 0.04             | (0.04)  |
| Artificial Reefs Total  | 0.04             | (0.04)  |
| Hardbottom Aphotic      | 0.04             | (0.04)  |
| Seabird Winter Offshore | 0.01             | (0.01)  |
| Mussel Reefs Total      | 0.0              | (0.0)   |
| Softbottom Photic       | 0.0              | (0.0)   |
| Transportbottom Photic  | 0.0              | (0.0)   |
| Shoreline Complexity    | 0.0              | (0.0)   |
| Angiosperms             | 0.0              | (0.0)   |
| Hardbottom Photic       | 0.0              | (0.0)   |
| Haploops Reef           | 0.0              | (0.0)   |
| Deep Reef               | 0.0              | (0.0)   |
| Rivermouth Fish         | 0.0              | (0.0)   |
| Grey Seals              | 0.0              | (0.0)   |
| Birds Coastal           | 0.0              | (0.0)   |
| Seabird Winter Coastal  | 0.0              | (0.0)   |
| Porpoise Beltsea        | 0.0              | (0.0)   |

Calculated with SyM

Date: 2018-03-22

Medins Havs och Vattenkonsulter AB



V332\_Gn

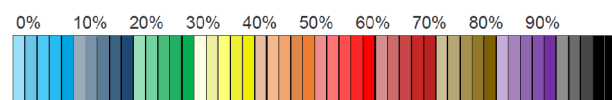
Miljöpåverkan i området jämfört med medelvärde för:

|                             |      |
|-----------------------------|------|
| S4 Västerhavet              | 113% |
| S4 Skagerrak                | 104% |
| S3 framtidsscenario år 2030 | 93%  |

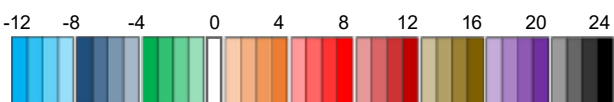
Områden och huvudanvändning



Procentuell andel av den högsta miljöpåverkan i Västerhavet, inklusive kustområden (S4)

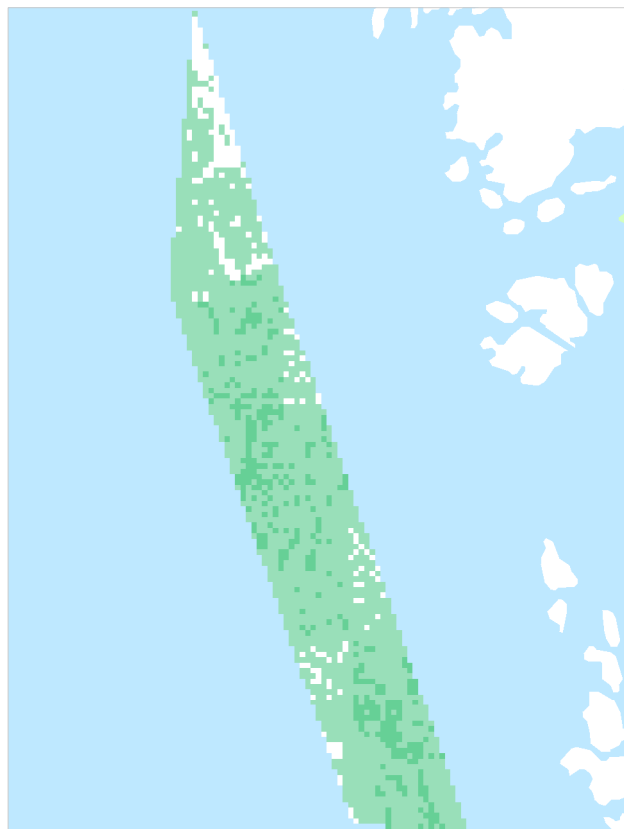
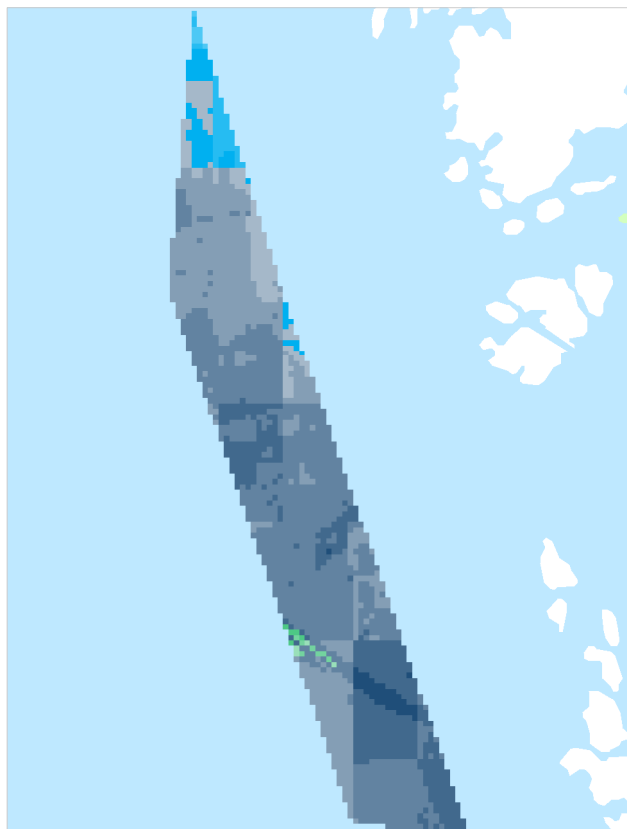


S4 plan 2030 - S3 Nollalternativ 2030.  
S4, S3 uttryckt som procentuell andel av den högsta miljöpåverkan i Västerhavet, inklusive kustområden.



S4 plan 2030

S4 plan 2030 - Nollalternativ 2030.



## Impacts Per Pressure

| Name                             | % of Total<br>S4 | (S3)    |
|----------------------------------|------------------|---------|
| Eutrophication                   |                  |         |
| Phosphorous Background           | 2.44             | (2.27)  |
| Anoxia Background                | 6.76             | (6.29)  |
| Nitrogen Background              | 20.78            | (19.33) |
| Total                            | 29.98            | (27.88) |
| General pollution                |                  |         |
| Tox Metal Background             | 0.0              | (0.0)   |
| Oilspill 2knots Wreck            | 0.0              | (0.0)   |
| Tox Synthetic Background         | 9.71             | (9.03)  |
| Tox Munition                     | 0.0              | (0.0)   |
| Tox Mine Risk                    | 1.8              | (1.67)  |
| Total                            | 11.5             | (10.7)  |
| Shipping                         |                  |         |
| Turbidity Shipping               | 0.0              | (0.0)   |
| Noise 2000Hz Shipping            | 0.11             | (0.11)  |
| Oilspill 2knots Shipping         | 2.53             | (2.36)  |
| Noise 125Hz Shipping             | 19.63            | (18.26) |
| Total                            | 22.28            | (20.72) |
| Coastal development              |                  |         |
| Tox Synthetic Treatmentplants    | 0.0              | (0.0)   |
| Habitatloss Dumping              | 0.0              | (0.0)   |
| Infrastructure                   | 0.0              | (0.0)   |
| Habitatloss Coastal Exploitation | 0.0              | (0.0)   |
| Total                            | 0.0              | (0.0)   |
| Recreational activities          |                  |         |
| Boating Pollution                | 0.63             | (0.58)  |
| Boating Noise                    | 0.22             | (0.21)  |
| Birdhunt                         | 0.01             | (0.01)  |
| Total                            | 0.86             | (0.8)   |
| Fisheries                        |                  |         |
| Abrasion Bottomtrawl             | 17.97            | (16.72) |
| Catch Gillnet                    | 0.81             | (0.89)  |
| Turbidity Bottom trawl           | 7.57             | (7.04)  |
| Catch Bottom trawl               | 4.8              | (7.96)  |
| Catch Pelagic trawl              | 0.98             | (1.25)  |
| Total                            | 32.13            | (33.85) |
| Industry                         |                  |         |
| Tox Synthetic Industry           | 0.0              | (0.0)   |
| Tox Synthetic Harbor             | 0.0              | (0.0)   |
| Total                            | 0.0              | (0.0)   |
| Mineral mining                   |                  |         |
| Turbidity Mining                 | 0.0              | (0.0)   |
| Habitat Loss Mining              | 0.0              | (0.0)   |
| Total                            | 0.0              | (0.0)   |
| Defence                          |                  |         |
| Tox Metal Military               | 0.0              | (0.0)   |
| Explosion SPL                    | 3.25             | (6.04)  |
| Explosion PM                     | 0.0              | (0.0)   |
| Total                            | 3.25             | (6.04)  |
| Aquaculture                      |                  |         |
| Habitatloss Mussel farming       | 0.0              | (0.0)   |
| Total                            | 0.0              | (0.0)   |
| Energy                           |                  |         |
| Avoidance Windpower              | 0.0              | (0.0)   |
| Noise 125Hz Windpower            | 0.0              | (0.0)   |
| EMF                              | 0.0              | (0.0)   |
| Total                            | 0.0              | (0.0)   |

V332\_Gn

## Cumulative Effect

|           | S4         | (S3)         |
|-----------|------------|--------------|
| Total     | 72391857.6 | (77826230.3) |
| Mean      | 27194.5    | (29236.0)    |
| Std. Dev. | 4491.2     | (4929.5)     |
| Min       | 9990.6     | (10151.2)    |
| Max       | 47042.6    | (49237.1)    |
| Area km²  | 166.34     |              |

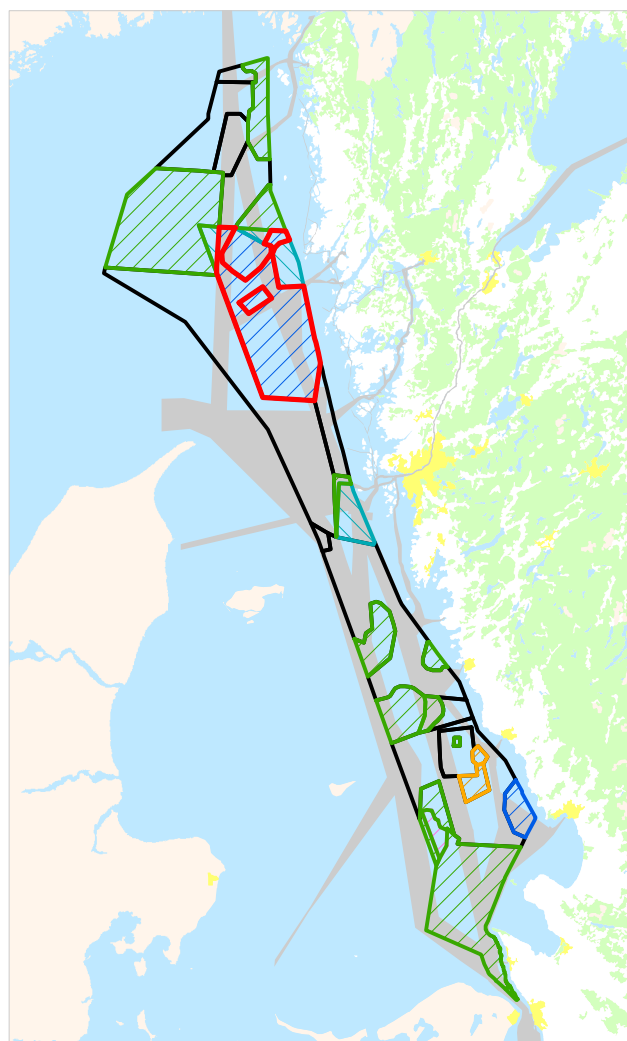
## Impacts Per Ecocomponent

| Name                    | % of Total<br>S4 | (S3)    |
|-------------------------|------------------|---------|
| Softbottom Aphotic      | 14.69            | (14.21) |
| Cod                     | 14.34            | (14.09) |
| Porpoise Northsea       | 12.8             | (13.49) |
| Herring                 | 11.54            | (11.96) |
| Softbottom Deep         | 9.21             | (8.91)  |
| Spawning Fish           | 9.1              | (9.19)  |
| Sprat                   | 9.06             | (9.65)  |
| Plankton Community      | 7.53             | (7.0)   |
| Harbour Seals           | 6.59             | (6.46)  |
| Transportbottom Aphotic | 2.01             | (1.97)  |
| Hardbottom Deep         | 1.66             | (1.61)  |
| Eel Migration           | 0.64             | (0.67)  |
| Transportbottom Deep    | 0.34             | (0.34)  |
| Hardbottom Aphotic      | 0.26             | (0.25)  |
| Artificial Reefs Total  | 0.09             | (0.08)  |
| Hardbottom Photic       | 0.06             | (0.05)  |
| Softbottom Photic       | 0.02             | (0.02)  |
| Birds Coastal           | 0.02             | (0.02)  |
| Transportbottom Photic  | 0.02             | (0.02)  |
| Seabird Winter Coastal  | 0.01             | (0.01)  |
| Rivermouth Fish         | 0.0              | (0.0)   |
| Porpoise Beltsea        | 0.0              | (0.0)   |
| Angiosperms             | 0.0              | (0.0)   |
| Shoreline Complexity    | 0.0              | (0.0)   |
| Haploops Reef           | 0.0              | (0.0)   |
| Deep Reef               | 0.0              | (0.0)   |
| Mussel Reefs Total      | 0.0              | (0.0)   |
| Grey Seals              | 0.0              | (0.0)   |
| Seabird Winter Offshore | 0.0              | (0.0)   |

Calculated with SyM

Date: 2018-03-22

Medins Havs och Vattenkonsulter AB



V333\_F

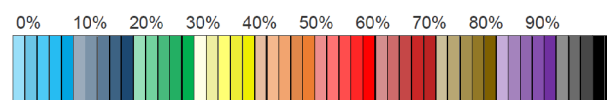
Miljöpåverkan i området jämfört med medelvärde för:

|                             |      |
|-----------------------------|------|
| S4 Västerhavet              | 112% |
| S4 Skagerrak                | 103% |
| S3 framtidsscenario år 2030 | 100% |

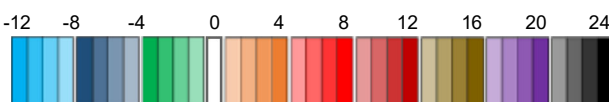
Områden och huvudanvändning



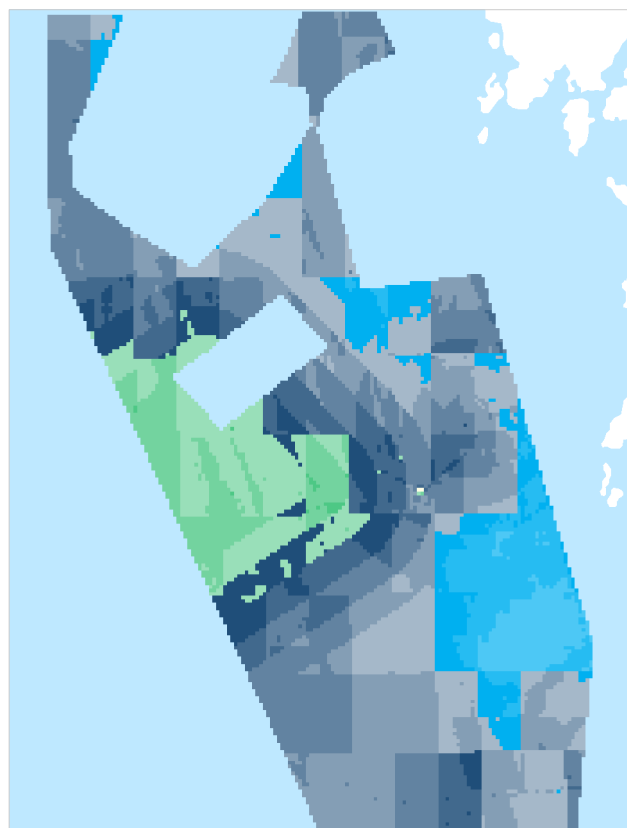
Procentuell andel av den högsta miljöpåverkan i Västerhavet, inklusive kustområden (S4)



S4 plan 2030 - S3 Nollalternativ 2030.  
S4, S3 uttryckt som procentuell andel av den högsta miljöpåverkan i Västerhavet, inklusive kustområden.



S4 plan 2030



S4 plan 2030 - Nollalternativ 2030.



## Impacts Per Pressure

| Name                             | % of Total<br>S4 | (S3)    |
|----------------------------------|------------------|---------|
| Eutrophication                   |                  |         |
| Phosphorous Background           | 2.1              | (2.1)   |
| Anoxia Background                | 0.85             | (0.85)  |
| Nitrogen Background              | 21.57            | (21.57) |
| Total                            | 24.53            | (24.53) |
| General pollution                |                  |         |
| Tox Metal Background             | 0.32             | (0.32)  |
| Oilspill 2knots Wreck            | 3.21             | (3.21)  |
| Tox Synthetic Background         | 9.55             | (9.55)  |
| Tox Munition                     | 16.28            | (16.28) |
| Tox Mine Risk                    | 0.04             | (0.04)  |
| Total                            | 29.4             | (29.4)  |
| Shipping                         |                  |         |
| Turbidity Shipping               | 0.0              | (0.0)   |
| Noise 2000Hz Shipping            | 0.0              | (0.0)   |
| Oilspill 2knots Shipping         | 2.11             | (2.11)  |
| Noise 125Hz Shipping             | 8.19             | (8.19)  |
| Total                            | 10.3             | (10.3)  |
| Coastal development              |                  |         |
| Tox Synthetic Treatmentplants    | 0.0              | (0.0)   |
| Habitatloss Dumping              | 0.0              | (0.0)   |
| Infrastructure                   | 0.0              | (0.0)   |
| Habitatloss Coastal Exploitation | 0.0              | (0.0)   |
| Total                            | 0.0              | (0.0)   |
| Recreational activities          |                  |         |
| Boating Pollution                | 0.06             | (0.06)  |
| Boating Noise                    | 0.02             | (0.02)  |
| Birdhunt                         | 0.0              | (0.0)   |
| Total                            | 0.08             | (0.08)  |
| Fisheries                        |                  |         |
| Abrasion Bottomtrawl             | 16.79            | (16.79) |
| Catch Gillnet                    | 1.21             | (1.21)  |
| Turbidity Bottom trawl           | 7.09             | (7.09)  |
| Catch Bottom trawl               | 8.42             | (8.42)  |
| Catch Pelagic trawl              | 0.07             | (0.07)  |
| Total                            | 33.58            | (33.58) |
| Industry                         |                  |         |
| Tox Synthetic Industry           | 0.0              | (0.0)   |
| Tox Synthetic Harbor             | 0.0              | (0.0)   |
| Total                            | 0.0              | (0.0)   |
| Mineral mining                   |                  |         |
| Turbidity Mining                 | 0.0              | (0.0)   |
| Habitat Loss Mining              | 0.0              | (0.0)   |
| Total                            | 0.0              | (0.0)   |
| Defence                          |                  |         |
| Tox Metal Military               | 0.0              | (0.0)   |
| Explosion SPL                    | 2.11             | (2.11)  |
| Explosion PM                     | 0.0              | (0.0)   |
| Total                            | 2.12             | (2.12)  |
| Aquaculture                      |                  |         |
| Habitatloss Mussel farming       | 0.0              | (0.0)   |
| Total                            | 0.0              | (0.0)   |
| Energy                           |                  |         |
| Avoidance Windpower              | 0.0              | (0.0)   |
| Noise 125Hz Windpower            | 0.0              | (0.0)   |
| EMF                              | 0.0              | (0.0)   |
| Total                            | 0.0              | (0.0)   |

V333\_F

## Cumulative Effect

|           | S4          | (S3)          |
|-----------|-------------|---------------|
| Total     | 472348986.9 | (472348986.9) |
| Mean      | 26963.6     | (26963.6)     |
| Std. Dev. | 8709.4      | (8709.4)      |
| Min       | 7535.1      | (7535.1)      |
| Max       | 60370.4     | (60370.4)     |
| Area km²  | 1094.67     |               |

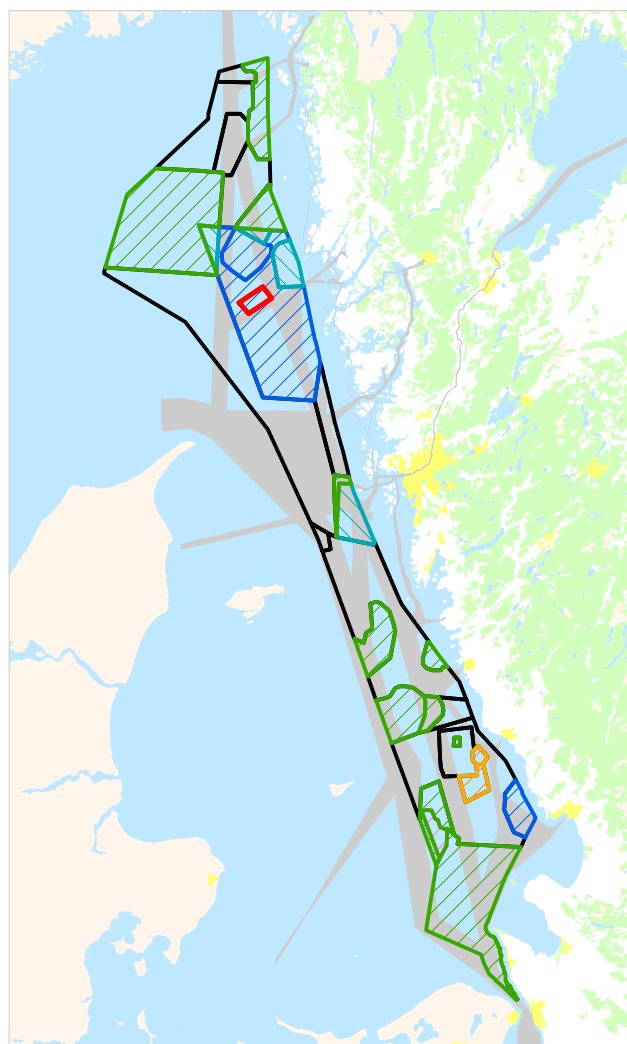
## Impacts Per Ecosystem

| Name                    | % of Total<br>S4 | (S3)    |
|-------------------------|------------------|---------|
| Softbottom Deep         | 26.3             | (26.3)  |
| Spawning Fish           | 14.96            | (14.96) |
| Cod                     | 13.64            | (13.64) |
| Porpoise Northsea       | 11.55            | (11.55) |
| Herring                 | 10.86            | (10.86) |
| Plankton Community      | 8.62             | (8.62)  |
| Harbour Seals           | 6.02             | (6.02)  |
| Sprat                   | 5.22             | (5.22)  |
| Softbottom Aphotic      | 1.19             | (1.19)  |
| Transportbottom Deep    | 0.86             | (0.86)  |
| Transportbottom Aphotic | 0.48             | (0.48)  |
| Hardbottom Aphotic      | 0.1              | (0.1)   |
| Hardbottom Deep         | 0.09             | (0.09)  |
| Eel Migration           | 0.03             | (0.03)  |
| Artificial Reefs Total  | 0.03             | (0.03)  |
| Transportbottom Photic  | 0.02             | (0.02)  |
| Softbottom Photic       | 0.02             | (0.02)  |
| Seabird Winter Coastal  | 0.01             | (0.01)  |
| Deep Reef               | 0.0              | (0.0)   |
| Hardbottom Photic       | 0.0              | (0.0)   |
| Mussel Reefs Total      | 0.0              | (0.0)   |
| Birds Coastal           | 0.0              | (0.0)   |
| Rivermouth Fish         | 0.0              | (0.0)   |
| Porpoise Beltsea        | 0.0              | (0.0)   |
| Angiosperms             | 0.0              | (0.0)   |
| Shoreline Complexity    | 0.0              | (0.0)   |
| Haploops Reef           | 0.0              | (0.0)   |
| Grey Seals              | 0.0              | (0.0)   |
| Seabird Winter Offshore | 0.0              | (0.0)   |

Calculated with SyM

Date: 2018-03-22

Medins Havs och Vattenkonsulter AB



V334\_Fn

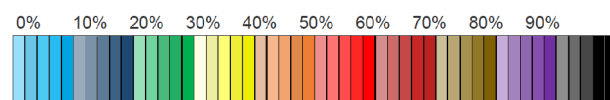
Miljöpåverkan i området jämfört med medelvärde för:

|                             |      |
|-----------------------------|------|
| S4 Västerhavet              | 138% |
| S4 Skagerrak                | 126% |
| S3 framtidsscenario år 2030 | 96%  |

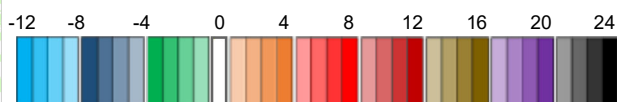
Områden och huvudanvändning



Procentuell andel av den högsta miljöpåverkan i Västerhavet, inklusive kustområden (S4)

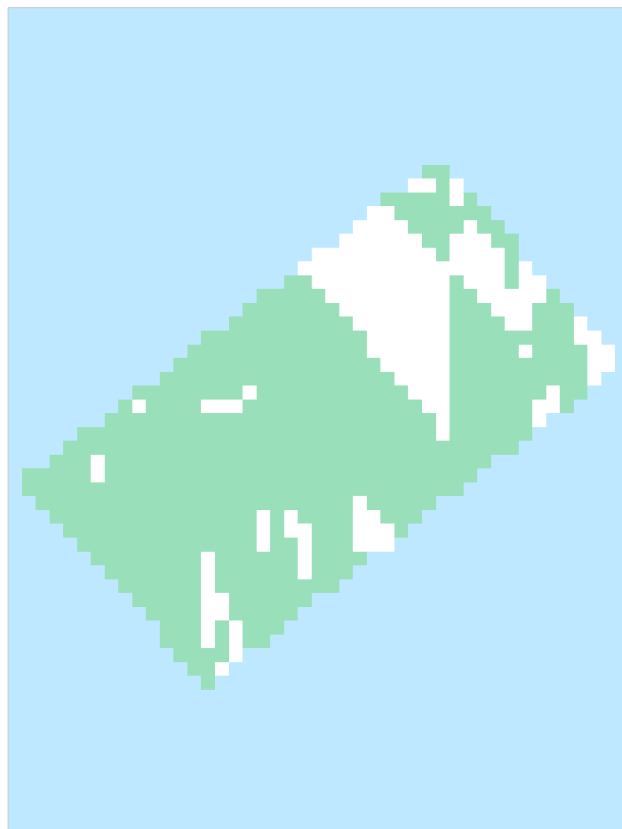
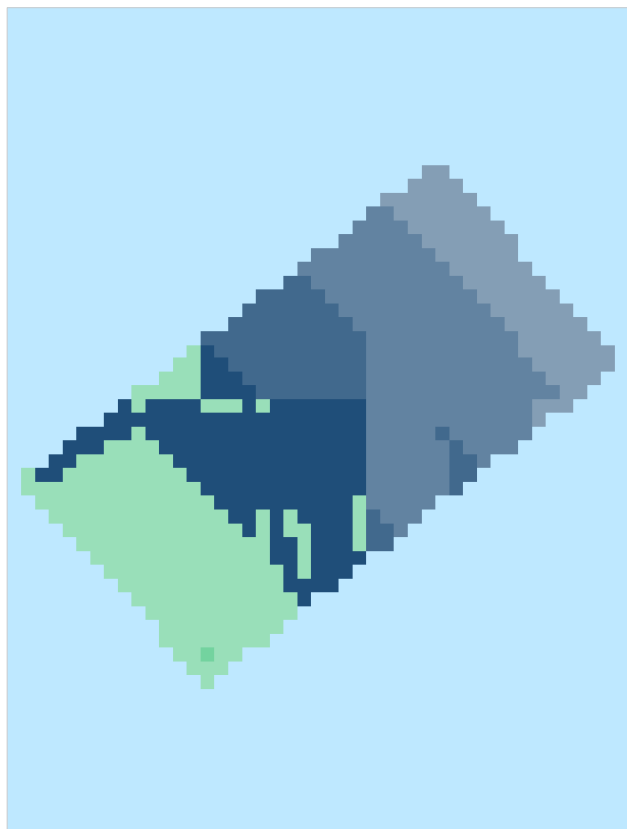


S4 plan 2030 - S3 Nollalternativ 2030.  
S4, S3 uttryckt som procentuell andel av den högsta miljöpåverkan i Västerhavet, inklusive kustområden.



S4 plan 2030

S4 plan 2030 - Nollalternativ 2030.



## Impacts Per Pressure

| Name                             | % of Total<br>S4 | (S3)    |
|----------------------------------|------------------|---------|
| Eutrophication                   |                  |         |
| Phosphorous Background           | 1.57             | (1.51)  |
| Anoxia Background                | 0.01             | (0.01)  |
| Nitrogen Background              | 16.79            | (16.14) |
| Total                            | 18.37            | (17.66) |
| General pollution                |                  |         |
| Tox Metal Background             | 0.14             | (0.13)  |
| Oilspill 2knots Wreck            | 0.0              | (0.0)   |
| Tox Synthetic Background         | 8.26             | (7.94)  |
| Tox Munition                     | 37.69            | (36.23) |
| Tox Mine Risk                    | 0.0              | (0.0)   |
| Total                            | 46.09            | (44.31) |
| Shipping                         |                  |         |
| Turbidity Shipping               | 0.0              | (0.0)   |
| Noise 2000Hz Shipping            | 0.0              | (0.0)   |
| Oilspill 2knots Shipping         | 1.41             | (1.35)  |
| Noise 125Hz Shipping             | 5.28             | (5.08)  |
| Total                            | 6.69             | (6.43)  |
| Coastal development              |                  |         |
| Tox Synthetic Treatmentplants    | 0.0              | (0.0)   |
| Habitatloss Dumping              | 0.0              | (0.0)   |
| Infrastructure                   | 0.0              | (0.0)   |
| Habitatloss Coastal Exploitation | 0.0              | (0.0)   |
| Total                            | 0.0              | (0.0)   |
| Recreational activities          |                  |         |
| Boating Pollution                | 0.0              | (0.0)   |
| Boating Noise                    | 0.0              | (0.0)   |
| Birdhunt                         | 0.0              | (0.0)   |
| Total                            | 0.0              | (0.0)   |
| Fisheries                        |                  |         |
| Abrasion Bottomtrawl             | 16.47            | (15.83) |
| Catch Gillnet                    | 1.36             | (1.58)  |
| Turbidity Bottom trawl           | 6.4              | (6.15)  |
| Catch Bottom trawl               | 4.2              | (7.21)  |
| Catch Pelagic trawl              | 0.0              | (0.0)   |
| Total                            | 28.42            | (30.78) |
| Industry                         |                  |         |
| Tox Synthetic Industry           | 0.0              | (0.0)   |
| Tox Synthetic Harbor             | 0.0              | (0.0)   |
| Total                            | 0.0              | (0.0)   |
| Mineral mining                   |                  |         |
| Turbidity Mining                 | 0.0              | (0.0)   |
| Habitat Loss Mining              | 0.0              | (0.0)   |
| Total                            | 0.0              | (0.0)   |
| Defence                          |                  |         |
| Tox Metal Military               | 0.0              | (0.0)   |
| Explosion SPL                    | 0.43             | (0.83)  |
| Explosion PM                     | 0.0              | (0.0)   |
| Total                            | 0.43             | (0.83)  |
| Aquaculture                      |                  |         |
| Habitatloss Mussel farming       | 0.0              | (0.0)   |
| Total                            | 0.0              | (0.0)   |
| Energy                           |                  |         |
| Avoidance Windpower              | 0.0              | (0.0)   |
| Noise 125Hz Windpower            | 0.0              | (0.0)   |
| EMF                              | 0.0              | (0.0)   |
| Total                            | 0.0              | (0.0)   |

V334\_Fn

## Cumulative Effect

|           | S4         | (S3)         |
|-----------|------------|--------------|
| Total     | 25261333.9 | (26278745.5) |
| Mean      | 33151.4    | (34486.5)    |
| Std. Dev. | 5640.8     | (5781.0)     |
| Min       | 23540.4    | (24443.5)    |
| Max       | 44882.3    | (46429.7)    |
| Area km²  | 47.71      |              |

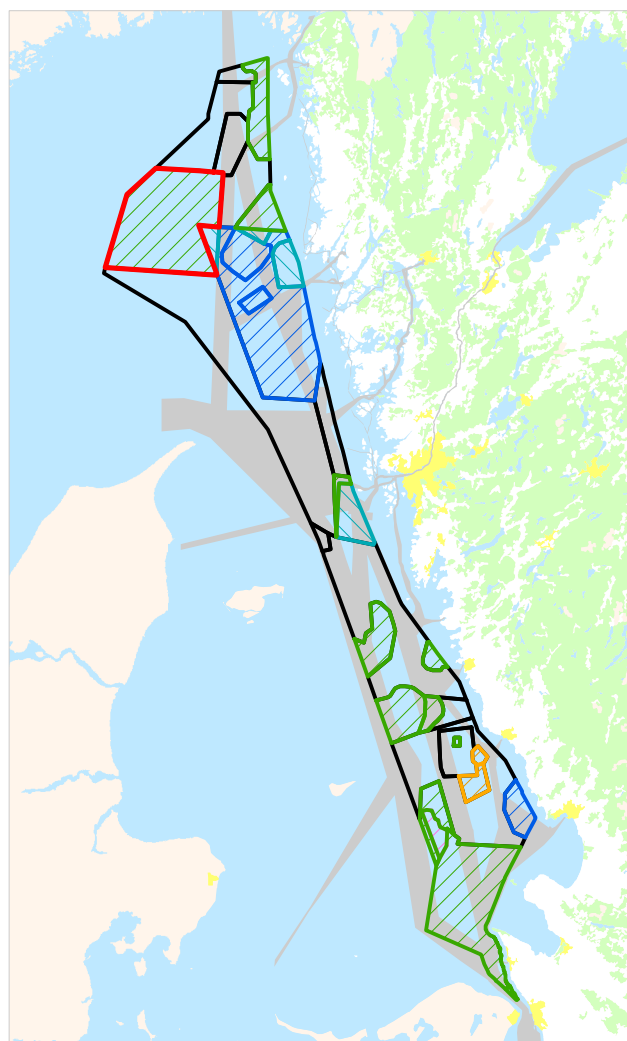
## Impacts Per Ecocomponent

| Name                    | % of Total<br>S4 | (S3)    |
|-------------------------|------------------|---------|
| Softbottom Deep         | 30.11            | (30.03) |
| Cod                     | 18.04            | (17.46) |
| Herring                 | 13.77            | (13.71) |
| Spawning Fish           | 12.72            | (13.3)  |
| Porpoise Northsea       | 9.44             | (10.04) |
| Harbour Seals           | 7.56             | (7.35)  |
| Plankton Community      | 7.0              | (6.73)  |
| Sprat                   | 0.88             | (0.9)   |
| Transportbottom Deep    | 0.47             | (0.47)  |
| Artificial Reefs Total  | 0.02             | (0.02)  |
| Seabird Winter Coastal  | 0.0              | (0.0)   |
| Birds Coastal           | 0.0              | (0.0)   |
| Eel Migration           | 0.0              | (0.0)   |
| Rivermouth Fish         | 0.0              | (0.0)   |
| Angiosperms             | 0.0              | (0.0)   |
| Shoreline Complexity    | 0.0              | (0.0)   |
| Porpoise Beltsea        | 0.0              | (0.0)   |
| Softbottom Aphotic      | 0.0              | (0.0)   |
| Softbottom Photic       | 0.0              | (0.0)   |
| Transportbottom Aphotic | 0.0              | (0.0)   |
| Transportbottom Photic  | 0.0              | (0.0)   |
| Hardbottom Deep         | 0.0              | (0.0)   |
| Hardbottom Aphotic      | 0.0              | (0.0)   |
| Hardbottom Photic       | 0.0              | (0.0)   |
| Haploops Reef           | 0.0              | (0.0)   |
| Deep Reef               | 0.0              | (0.0)   |
| Mussel Reefs Total      | 0.0              | (0.0)   |
| Grey Seals              | 0.0              | (0.0)   |
| Seabird Winter Offshore | 0.0              | (0.0)   |

Calculated with SyM

Date: 2018-03-22

Medins Havs och Vattenkonsulter AB



V335\_N

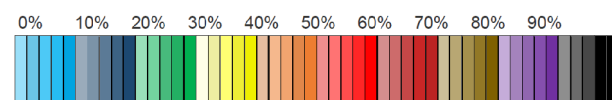
Miljöpåverkan i området jämfört med medelvärde för:

|                             |      |
|-----------------------------|------|
| S4 Västerhavet              | 87%  |
| S4 Skagerrak                | 80%  |
| S3 framtidsscenario år 2030 | 100% |

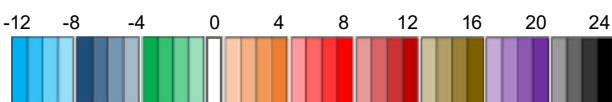
Områden och huvudanvändning



Procentuell andel av den högsta miljöpåverkan i Västerhavet, inklusive kustområden (S4)



S4 plan 2030 - S3 Nollalternativ 2030.  
S4, S3 uttryckt som procentuell andel av den högsta miljöpåverkan i Västerhavet, inklusive kustområden.



S4 plan 2030

S4 plan 2030 - Nollalternativ 2030.



## Impacts Per Pressure

| Name                             | % of Total<br>S4 | (S3)    |
|----------------------------------|------------------|---------|
| Eutrophication                   |                  |         |
| Phosphorous Background           | 1.82             | (1.82)  |
| Anoxia Background                | 0.0              | (0.0)   |
| Nitrogen Background              | 21.53            | (21.53) |
| Total                            | 23.35            | (23.35) |
| General pollution                |                  |         |
| Tox Metal Background             | 6.79             | (6.79)  |
| Oilspill 2knots Wreck            | 0.0              | (0.0)   |
| Tox Synthetic Background         | 17.21            | (17.21) |
| Tox Munition                     | 0.0              | (0.0)   |
| Tox Mine Risk                    | 0.0              | (0.0)   |
| Total                            | 24.0             | (24.0)  |
| Shipping                         |                  |         |
| Turbidity Shipping               | 0.0              | (0.0)   |
| Noise 2000Hz Shipping            | 0.0              | (0.0)   |
| Oilspill 2knots Shipping         | 1.1              | (1.1)   |
| Noise 125Hz Shipping             | 2.9              | (2.9)   |
| Total                            | 4.0              | (4.0)   |
| Coastal development              |                  |         |
| Tox Synthetic Treatmentplants    | 0.0              | (0.0)   |
| Habitatloss Dumping              | 0.0              | (0.0)   |
| Infrastructure                   | 0.0              | (0.0)   |
| Habitatloss Coastal Exploitation | 0.0              | (0.0)   |
| Total                            | 0.0              | (0.0)   |
| Recreational activities          |                  |         |
| Boating Pollution                | 0.0              | (0.0)   |
| Boating Noise                    | 0.0              | (0.0)   |
| Birdhunt                         | 0.0              | (0.0)   |
| Total                            | 0.0              | (0.0)   |
| Fisheries                        |                  |         |
| Abrasion Bottomtrawl             | 24.25            | (24.25) |
| Catch Gillnet                    | 0.06             | (0.06)  |
| Turbidity Bottom trawl           | 11.06            | (11.06) |
| Catch Bottom trawl               | 13.28            | (13.28) |
| Catch Pelagic trawl              | 0.0              | (0.0)   |
| Total                            | 48.65            | (48.65) |
| Industry                         |                  |         |
| Tox Synthetic Industry           | 0.0              | (0.0)   |
| Tox Synthetic Harbor             | 0.0              | (0.0)   |
| Total                            | 0.0              | (0.0)   |
| Mineral mining                   |                  |         |
| Turbidity Mining                 | 0.0              | (0.0)   |
| Habitat Loss Mining              | 0.0              | (0.0)   |
| Total                            | 0.0              | (0.0)   |
| Defence                          |                  |         |
| Tox Metal Military               | 0.0              | (0.0)   |
| Explosion SPL                    | 0.0              | (0.0)   |
| Explosion PM                     | 0.0              | (0.0)   |
| Total                            | 0.0              | (0.0)   |
| Aquaculture                      |                  |         |
| Habitatloss Mussel farming       | 0.0              | (0.0)   |
| Total                            | 0.0              | (0.0)   |
| Energy                           |                  |         |
| Avoidance Windpower              | 0.0              | (0.0)   |
| Noise 125Hz Windpower            | 0.0              | (0.0)   |
| EMF                              | 0.0              | (0.0)   |
| Total                            | 0.0              | (0.0)   |

V335\_N

## Cumulative Effect

|           | S4          | (S3)          |
|-----------|-------------|---------------|
| Total     | 372478382.1 | (372478382.1) |
| Mean      | 20934.0     | (20934.0)     |
| Std. Dev. | 6791.3      | (6791.3)      |
| Min       | 8878.4      | (8878.4)      |
| Max       | 44203.8     | (44203.8)     |
| Area km²  | 1112.29     |               |

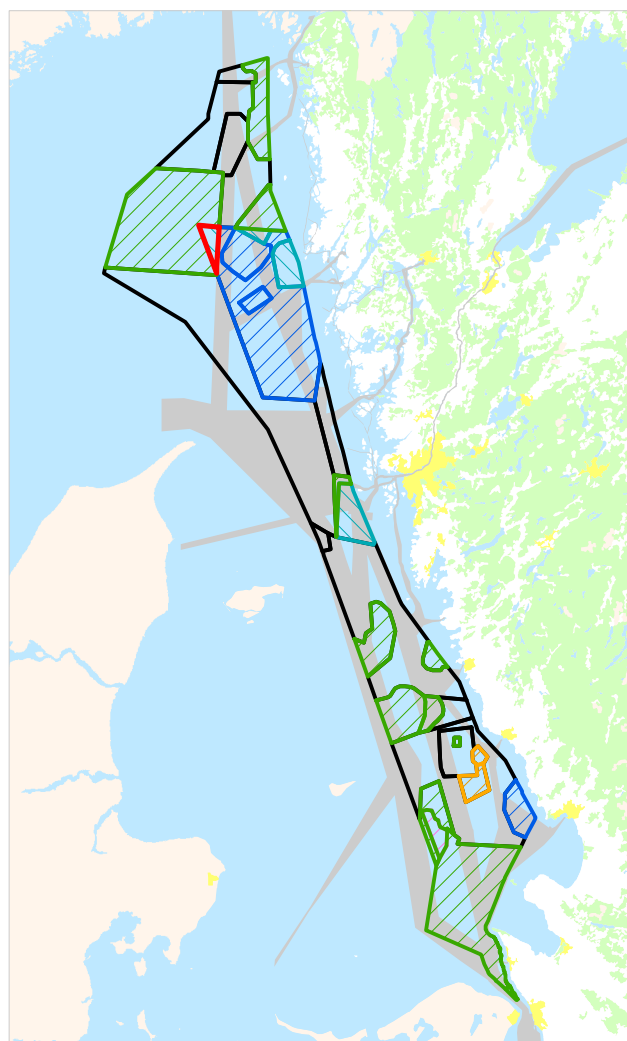
## Impacts Per Ecocomponent

| Name                    | % of Total<br>S4 | (S3)    |
|-------------------------|------------------|---------|
| Softbottom Deep         | 38.92            | (38.92) |
| Spawning Fish           | 19.02            | (19.02) |
| Plankton Community      | 12.61            | (12.61) |
| Cod                     | 11.59            | (11.59) |
| Porpoise Northsea       | 9.61             | (9.61)  |
| Herring                 | 5.63             | (5.63)  |
| Harbour Seals           | 1.6              | (1.6)   |
| Transportbottom Deep    | 0.5              | (0.5)   |
| Deep Reef               | 0.36             | (0.36)  |
| Sprat                   | 0.12             | (0.12)  |
| Hardbottom Aphotic      | 0.02             | (0.02)  |
| Mussel Reefs Total      | 0.01             | (0.01)  |
| Artificial Reefs Total  | 0.0              | (0.0)   |
| Angiosperms             | 0.0              | (0.0)   |
| Rivermouth Fish         | 0.0              | (0.0)   |
| Birds Coastal           | 0.0              | (0.0)   |
| Seabird Winter Coastal  | 0.0              | (0.0)   |
| Eel Migration           | 0.0              | (0.0)   |
| Porpoise Beltsea        | 0.0              | (0.0)   |
| Shoreline Complexity    | 0.0              | (0.0)   |
| Softbottom Aphotic      | 0.0              | (0.0)   |
| Softbottom Photic       | 0.0              | (0.0)   |
| Transportbottom Aphotic | 0.0              | (0.0)   |
| Transportbottom Photic  | 0.0              | (0.0)   |
| Hardbottom Deep         | 0.0              | (0.0)   |
| Hardbottom Photic       | 0.0              | (0.0)   |
| Haploops Reef           | 0.0              | (0.0)   |
| Grey Seals              | 0.0              | (0.0)   |
| Seabird Winter Offshore | 0.0              | (0.0)   |

Calculated with SyM

Date: 2018-03-22

Medins Havs och Vattenkonsulter AB



V336\_FN

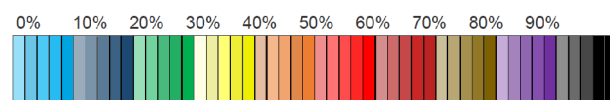
Miljöpåverkan i området jämfört med medelvärde för:

|                             |      |
|-----------------------------|------|
| S4 Västerhavet              | 117% |
| S4 Skagerrak                | 107% |
| S3 framtidsscenario år 2030 | 100% |

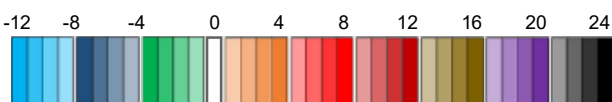
Områden och huvudanvändning



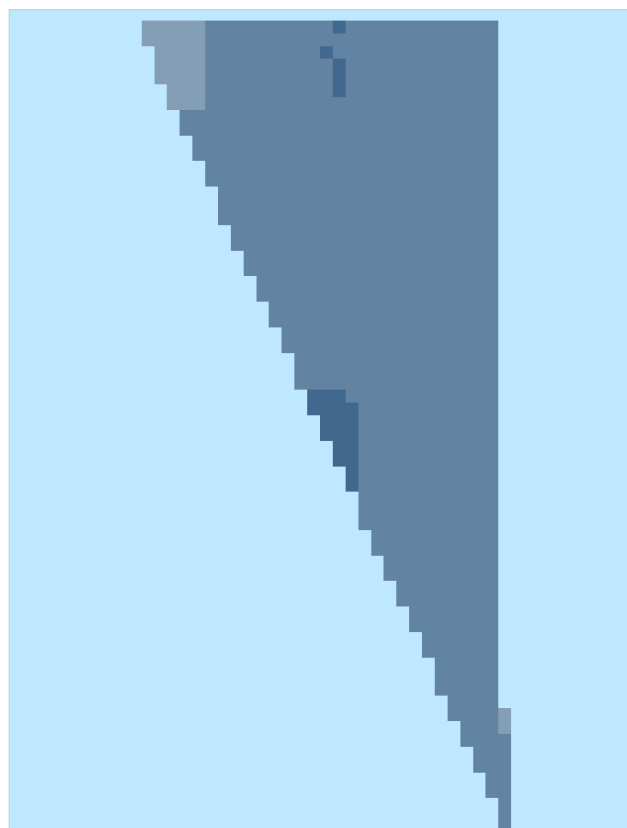
Procentuell andel av den högsta miljöpåverkan i Västerhavet, inklusive kustområden (S4)



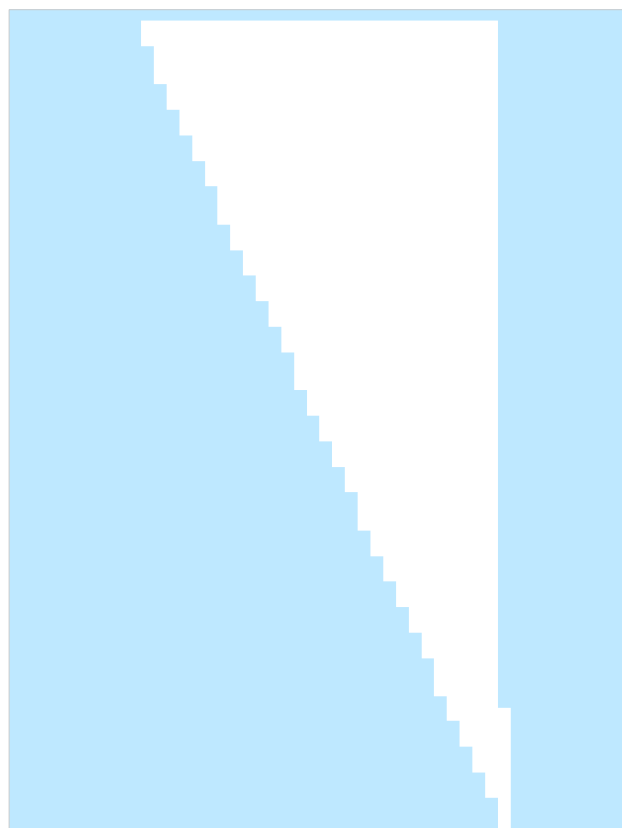
S4 plan 2030 - S3 Nollalternativ 2030.  
S4, S3 uttryckt som procentuell andel av den högsta miljöpåverkan i Västerhavet, inklusive kustområden.



S4 plan 2030



S4 plan 2030 - Nollalternativ 2030.



## Impacts Per Pressure

| Name                             | % of Total<br>S4 | (S3)    |
|----------------------------------|------------------|---------|
| Eutrophication                   |                  |         |
| Phosphorous Background           | 1.54             | (1.54)  |
| Anoxia Background                | 0.0              | (0.0)   |
| Nitrogen Background              | 17.09            | (17.09) |
| Total                            | 18.63            | (18.63) |
| General pollution                |                  |         |
| Tox Metal Background             | 2.02             | (2.02)  |
| Oilspill 2knots Wreck            | 0.0              | (0.0)   |
| Tox Synthetic Background         | 11.93            | (11.93) |
| Tox Munition                     | 0.0              | (0.0)   |
| Tox Mine Risk                    | 0.0              | (0.0)   |
| Total                            | 13.95            | (13.95) |
| Shipping                         |                  |         |
| Turbidity Shipping               | 0.0              | (0.0)   |
| Noise 2000Hz Shipping            | 0.0              | (0.0)   |
| Oilspill 2knots Shipping         | 1.23             | (1.23)  |
| Noise 125Hz Shipping             | 5.88             | (5.88)  |
| Total                            | 7.11             | (7.11)  |
| Coastal development              |                  |         |
| Tox Synthetic Treatmentplants    | 0.0              | (0.0)   |
| Habitatloss Dumping              | 0.0              | (0.0)   |
| Infrastructure                   | 0.0              | (0.0)   |
| Habitatloss Coastal Exploitation | 0.0              | (0.0)   |
| Total                            | 0.0              | (0.0)   |
| Recreational activities          |                  |         |
| Boating Pollution                | 0.0              | (0.0)   |
| Boating Noise                    | 0.0              | (0.0)   |
| Birdhunt                         | 0.0              | (0.0)   |
| Total                            | 0.0              | (0.0)   |
| Fisheries                        |                  |         |
| Abrasion Bottomtrawl             | 28.78            | (28.78) |
| Catch Gillnet                    | 0.0              | (0.0)   |
| Turbidity Bottom trawl           | 14.52            | (14.52) |
| Catch Bottom trawl               | 17.01            | (17.01) |
| Catch Pelagic trawl              | 0.0              | (0.0)   |
| Total                            | 60.31            | (60.31) |
| Industry                         |                  |         |
| Tox Synthetic Industry           | 0.0              | (0.0)   |
| Tox Synthetic Harbor             | 0.0              | (0.0)   |
| Total                            | 0.0              | (0.0)   |
| Mineral mining                   |                  |         |
| Turbidity Mining                 | 0.0              | (0.0)   |
| Habitat Loss Mining              | 0.0              | (0.0)   |
| Total                            | 0.0              | (0.0)   |
| Defence                          |                  |         |
| Tox Metal Military               | 0.0              | (0.0)   |
| Explosion SPL                    | 0.0              | (0.0)   |
| Explosion PM                     | 0.0              | (0.0)   |
| Total                            | 0.0              | (0.0)   |
| Aquaculture                      |                  |         |
| Habitatloss Mussel farming       | 0.0              | (0.0)   |
| Total                            | 0.0              | (0.0)   |
| Energy                           |                  |         |
| Avoidance Windpower              | 0.0              | (0.0)   |
| Noise 125Hz Windpower            | 0.0              | (0.0)   |
| EMF                              | 0.0              | (0.0)   |
| Total                            | 0.0              | (0.0)   |

V336\_FN

## Cumulative Effect

|           | S4         | (S3)         |
|-----------|------------|--------------|
| Total     | 25406059.1 | (25406059.1) |
| Mean      | 28135.2    | (28135.2)    |
| Std. Dev. | 1224.2     | (1224.2)     |
| Min       | 23453.5    | (23453.5)    |
| Max       | 32353.8    | (32353.8)    |
| Area km²  | 56.79      |              |

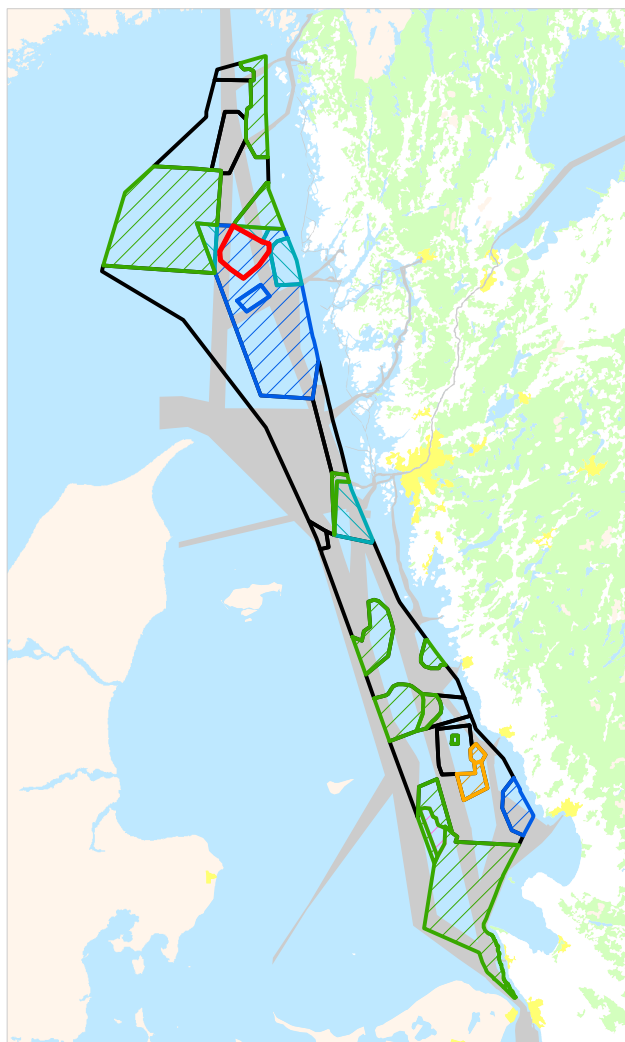
## Impacts Per Ecocomponent

| Name                    | % of Total<br>S4 | (S3)    |
|-------------------------|------------------|---------|
| Softbottom Deep         | 37.43            | (37.43) |
| Spawning Fish           | 18.59            | (18.59) |
| Cod                     | 11.93            | (11.93) |
| Plankton Community      | 10.48            | (10.48) |
| Porpoise Northsea       | 9.51             | (9.51)  |
| Herring                 | 7.44             | (7.44)  |
| Harbour Seals           | 3.88             | (3.88)  |
| Transportbottom Deep    | 0.55             | (0.55)  |
| Sprat                   | 0.18             | (0.18)  |
| Softbottom Aphotic      | 0.0              | (0.0)   |
| Seabird Winter Coastal  | 0.0              | (0.0)   |
| Birds Coastal           | 0.0              | (0.0)   |
| Eel Migration           | 0.0              | (0.0)   |
| Rivermouth Fish         | 0.0              | (0.0)   |
| Angiosperms             | 0.0              | (0.0)   |
| Shoreline Complexity    | 0.0              | (0.0)   |
| Porpoise Beltsea        | 0.0              | (0.0)   |
| Softbottom Photic       | 0.0              | (0.0)   |
| Transportbottom Aphotic | 0.0              | (0.0)   |
| Transportbottom Photic  | 0.0              | (0.0)   |
| Hardbottom Deep         | 0.0              | (0.0)   |
| Hardbottom Aphotic      | 0.0              | (0.0)   |
| Hardbottom Photic       | 0.0              | (0.0)   |
| Artificial Reefs Total  | 0.0              | (0.0)   |
| Haploops Reef           | 0.0              | (0.0)   |
| Deep Reef               | 0.0              | (0.0)   |
| Mussel Reefs Total      | 0.0              | (0.0)   |
| Grey Seals              | 0.0              | (0.0)   |
| Seabird Winter Offshore | 0.0              | (0.0)   |

Calculated with SyM

Date: 2018-03-22

Medins Havs och Vattenkonsulter AB



V337\_Fn

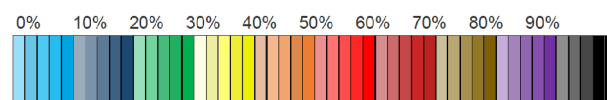
Miljöpåverkan i området jämfört med medelvärde för:

|                             |     |
|-----------------------------|-----|
| S4 Västerhavet              | 68% |
| S4 Skagerrak                | 62% |
| S3 framtidsscenario år 2030 | 97% |

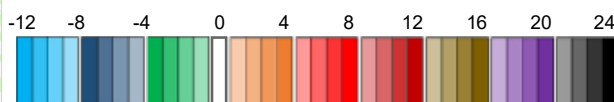
Områden och huvudanvändning



Procentuell andel av den högsta miljöpåverkan i Västerhavet, inklusive kustområden (S4)

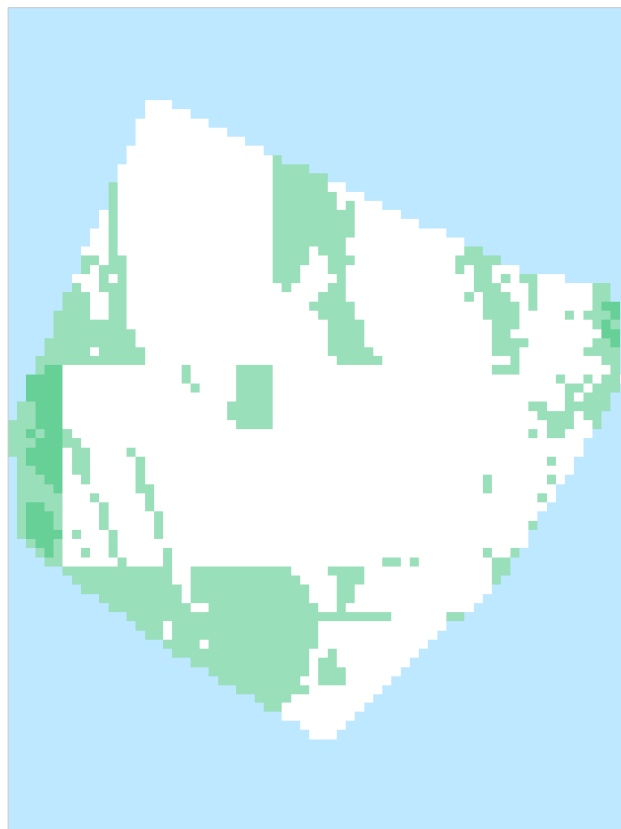
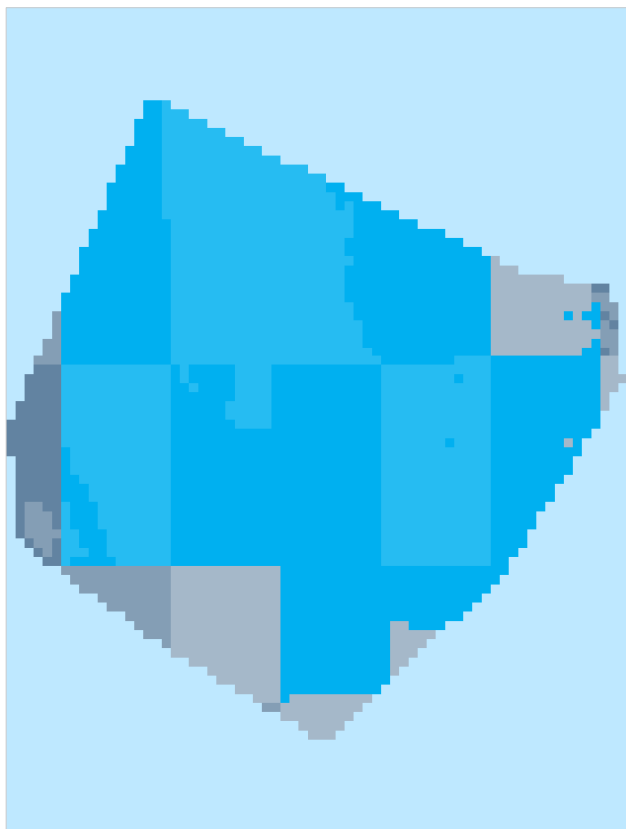


S4 plan 2030 - S3 Nollalternativ 2030.  
S4, S3 uttryckt som procentuell andel av den högsta miljöpåverkan i Västerhavet, inklusive kustområden.



S4 plan 2030

S4 plan 2030 - Nollalternativ 2030.



## Impacts Per Pressure

| Name                             | % of Total<br>S4 | (S3)    |
|----------------------------------|------------------|---------|
| Eutrophication                   |                  |         |
| Phosphorous Background           | 3.08             | (2.98)  |
| Anoxia Background                | 0.4              | (0.39)  |
| Nitrogen Background              | 32.14            | (31.08) |
| Total                            | 35.62            | (34.45) |
| General pollution                |                  |         |
| Tox Metal Background             | 0.81             | (0.79)  |
| Oilspill 2knots Wreck            | 0.0              | (0.0)   |
| Tox Synthetic Background         | 18.2             | (17.61) |
| Tox Munition                     | 0.98             | (0.95)  |
| Tox Mine Risk                    | 0.0              | (0.0)   |
| Total                            | 20.0             | (19.34) |
| Shipping                         |                  |         |
| Turbidity Shipping               | 0.0              | (0.0)   |
| Noise 2000Hz Shipping            | 0.0              | (0.0)   |
| Oilspill 2knots Shipping         | 2.26             | (2.19)  |
| Noise 125Hz Shipping             | 12.25            | (11.85) |
| Total                            | 14.51            | (14.04) |
| Coastal development              |                  |         |
| Tox Synthetic Treatmentplants    | 0.0              | (0.0)   |
| Habitatloss Dumping              | 0.0              | (0.0)   |
| Infrastructure                   | 0.0              | (0.0)   |
| Habitatloss Coastal Exploitation | 0.0              | (0.0)   |
| Total                            | 0.0              | (0.0)   |
| Recreational activities          |                  |         |
| Boating Pollution                | 0.0              | (0.0)   |
| Boating Noise                    | 0.0              | (0.0)   |
| Birdhunt                         | 0.0              | (0.0)   |
| Total                            | 0.0              | (0.0)   |
| Fisheries                        |                  |         |
| Abrasion Bottomtrawl             | 18.89            | (18.27) |
| Catch Gillnet                    | 0.71             | (0.83)  |
| Turbidity Bottom trawl           | 6.16             | (5.96)  |
| Catch Bottom trawl               | 4.11             | (7.11)  |
| Catch Pelagic trawl              | 0.0              | (0.0)   |
| Total                            | 29.87            | (32.17) |
| Industry                         |                  |         |
| Tox Synthetic Industry           | 0.0              | (0.0)   |
| Tox Synthetic Harbor             | 0.0              | (0.0)   |
| Total                            | 0.0              | (0.0)   |
| Mineral mining                   |                  |         |
| Turbidity Mining                 | 0.0              | (0.0)   |
| Habitat Loss Mining              | 0.0              | (0.0)   |
| Total                            | 0.0              | (0.0)   |
| Defence                          |                  |         |
| Tox Metal Military               | 0.0              | (0.0)   |
| Explosion SPL                    | 0.0              | (0.0)   |
| Explosion PM                     | 0.0              | (0.0)   |
| Total                            | 0.0              | (0.0)   |
| Aquaculture                      |                  |         |
| Habitatloss Musselfarming        | 0.0              | (0.0)   |
| Total                            | 0.0              | (0.0)   |
| Energy                           |                  |         |
| Avoidance Windpower              | 0.0              | (0.0)   |
| Noise 125Hz Windpower            | 0.0              | (0.0)   |
| EMF                              | 0.0              | (0.0)   |
| Total                            | 0.0              | (0.0)   |

V337\_Fn

## Cumulative Effect

|           | S4         | (S3)         |
|-----------|------------|--------------|
| Total     | 47798318.9 | (49418842.2) |
| Mean      | 16335.7    | (16889.6)    |
| Std. Dev. | 3451.2     | (3908.3)     |
| Min       | 12649.5    | (12860.7)    |
| Max       | 28425.0    | (30751.1)    |
| Area km²  | 182.89     |              |

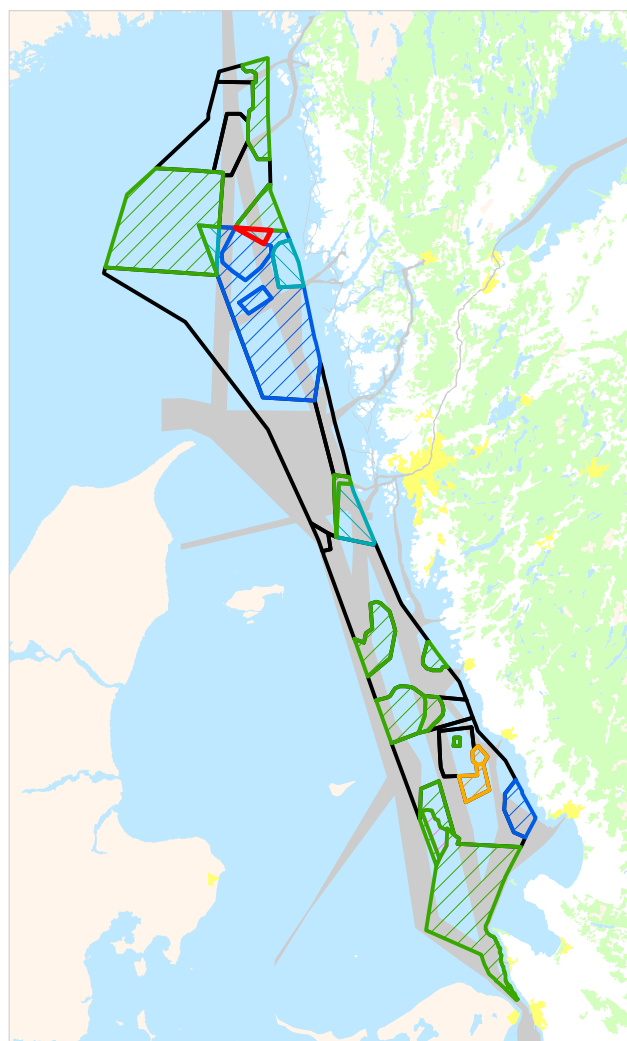
## Impacts Per Ecocomponent

| Name                    | % of Total<br>S4 | (S3)    |
|-------------------------|------------------|---------|
| Softbottom Deep         | 32.61            | (32.54) |
| Spawning Fish           | 17.29            | (17.76) |
| Cod                     | 11.72            | (11.34) |
| Porpoise Northsea       | 11.54            | (11.91) |
| Plankton Community      | 11.23            | (10.87) |
| Herring                 | 8.08             | (8.18)  |
| Harbour Seals           | 5.8              | (5.63)  |
| Transportbottom Deep    | 1.12             | (1.15)  |
| Hardbottom Aphotic      | 0.31             | (0.31)  |
| Sprat                   | 0.25             | (0.26)  |
| Eel Migration           | 0.03             | (0.03)  |
| Artificial Reefs Total  | 0.03             | (0.03)  |
| Rivermouth Fish         | 0.0              | (0.0)   |
| Birds Coastal           | 0.0              | (0.0)   |
| Seabird Winter Coastal  | 0.0              | (0.0)   |
| Angiosperms             | 0.0              | (0.0)   |
| Shoreline Complexity    | 0.0              | (0.0)   |
| Porpoise Beltsea        | 0.0              | (0.0)   |
| Softbottom Aphotic      | 0.0              | (0.0)   |
| Softbottom Photic       | 0.0              | (0.0)   |
| Transportbottom Aphotic | 0.0              | (0.0)   |
| Transportbottom Photic  | 0.0              | (0.0)   |
| Hardbottom Deep         | 0.0              | (0.0)   |
| Hardbottom Photic       | 0.0              | (0.0)   |
| Haploops Reef           | 0.0              | (0.0)   |
| Deep Reef               | 0.0              | (0.0)   |
| Mussel Reefs Total      | 0.0              | (0.0)   |
| Grey Seals              | 0.0              | (0.0)   |
| Seabird Winter Offshore | 0.0              | (0.0)   |

Calculated with SyM

Date: 2018-03-22

Medins Havs och Vattenkonsulter AB



V338\_FN

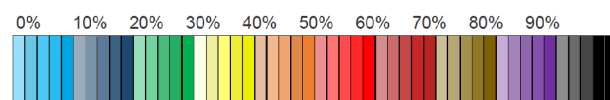
Miljöpåverkan i området jämfört med medelvärde för:

|                             |      |
|-----------------------------|------|
| S4 Västerhavet              | 68%  |
| S4 Skagerrak                | 63%  |
| S3 framtidsscenario år 2030 | 100% |

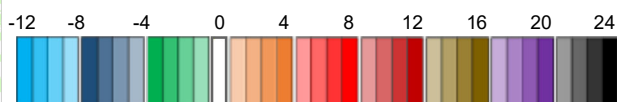
Områden och huvudanvändning



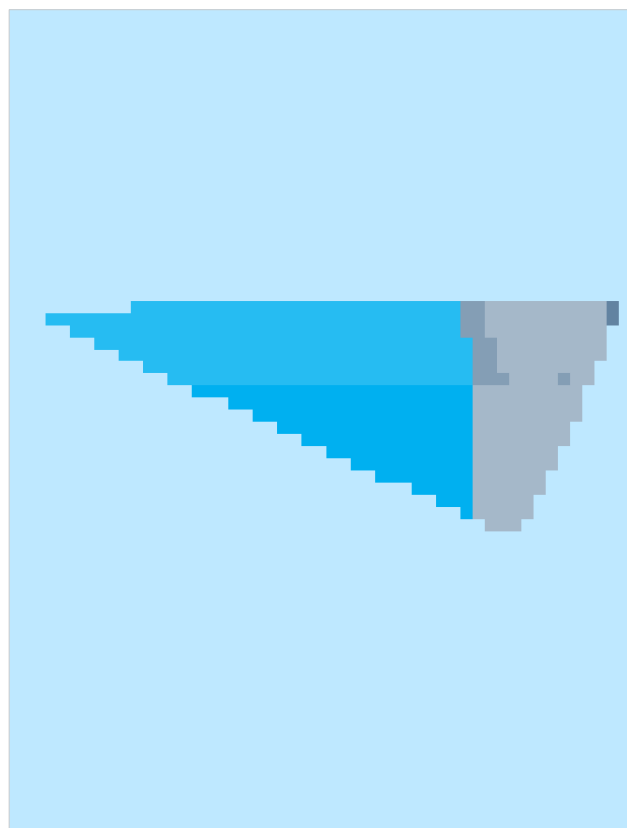
Procentuell andel av den högsta miljöpåverkan i Västerhavet, inklusive kustområden (S4)



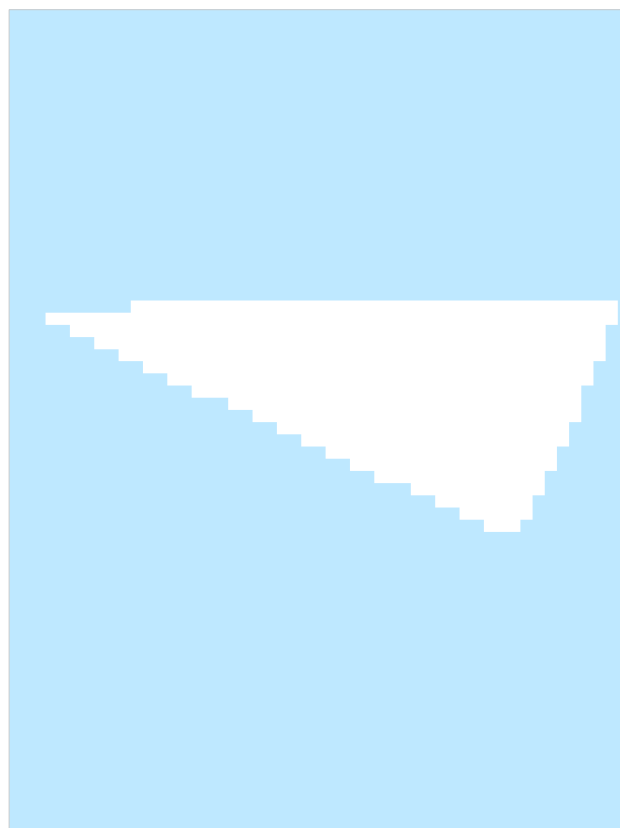
S4 plan 2030 - S3 Nollalternativ 2030.  
S4, S3 uttryckt som procentuell andel av den högsta miljöpåverkan i Västerhavet, inklusive kustområden.



S4 plan 2030



S4 plan 2030 - Nollalternativ 2030.



## Impacts Per Pressure

| Name                             | % of Total<br>S4 | (S3)    |
|----------------------------------|------------------|---------|
| Eutrophication                   |                  |         |
| Phosphorous Background           | 3.15             | (3.15)  |
| Anoxia Background                | 0.73             | (0.73)  |
| Nitrogen Background              | 32.57            | (32.57) |
| Total                            | 36.44            | (36.44) |
| General pollution                |                  |         |
| Tox Metal Background             | 0.07             | (0.07)  |
| Oilspill 2knots Wreck            | 0.0              | (0.0)   |
| Tox Synthetic Background         | 17.26            | (17.26) |
| Tox Munition                     | 0.0              | (0.0)   |
| Tox Mine Risk                    | 0.0              | (0.0)   |
| Total                            | 17.33            | (17.33) |
| Shipping                         |                  |         |
| Turbidity Shipping               | 0.0              | (0.0)   |
| Noise 2000Hz Shipping            | 0.0              | (0.0)   |
| Oilspill 2knots Shipping         | 2.63             | (2.63)  |
| Noise 125Hz Shipping             | 14.75            | (14.75) |
| Total                            | 17.38            | (17.38) |
| Coastal development              |                  |         |
| Tox Synthetic Treatmentplants    | 0.0              | (0.0)   |
| Habitatloss Dumping              | 0.0              | (0.0)   |
| Infrastructure                   | 0.0              | (0.0)   |
| Habitatloss Coastal Exploitation | 0.0              | (0.0)   |
| Total                            | 0.0              | (0.0)   |
| Recreational activities          |                  |         |
| Boating Pollution                | 0.0              | (0.0)   |
| Boating Noise                    | 0.0              | (0.0)   |
| Birdhunt                         | 0.0              | (0.0)   |
| Total                            | 0.0              | (0.0)   |
| Fisheries                        |                  |         |
| Abrasion Bottomtrawl             | 17.19            | (17.19) |
| Catch Gillnet                    | 0.03             | (0.03)  |
| Turbidity Bottom trawl           | 5.33             | (5.33)  |
| Catch Bottom trawl               | 6.3              | (6.3)   |
| Catch Pelagic trawl              | 0.0              | (0.0)   |
| Total                            | 28.85            | (28.85) |
| Industry                         |                  |         |
| Tox Synthetic Industry           | 0.0              | (0.0)   |
| Tox Synthetic Harbor             | 0.0              | (0.0)   |
| Total                            | 0.0              | (0.0)   |
| Mineral mining                   |                  |         |
| Turbidity Mining                 | 0.0              | (0.0)   |
| Habitat Loss Mining              | 0.0              | (0.0)   |
| Total                            | 0.0              | (0.0)   |
| Defence                          |                  |         |
| Tox Metal Military               | 0.0              | (0.0)   |
| Explosion SPL                    | 0.0              | (0.0)   |
| Explosion PM                     | 0.0              | (0.0)   |
| Total                            | 0.0              | (0.0)   |
| Aquaculture                      |                  |         |
| Habitatloss Mussel farming       | 0.0              | (0.0)   |
| Total                            | 0.0              | (0.0)   |
| Energy                           |                  |         |
| Avoidance Windpower              | 0.0              | (0.0)   |
| Noise 125Hz Windpower            | 0.0              | (0.0)   |
| EMF                              | 0.0              | (0.0)   |
| Total                            | 0.0              | (0.0)   |

V338\_FN

## Cumulative Effect

|           | S4        | (S3)        |
|-----------|-----------|-------------|
| Total     | 8165489.2 | (8165489.2) |
| Mean      | 16429.6   | (16429.6)   |
| Std. Dev. | 3534.1    | (3534.1)    |
| Min       | 11628.3   | (11628.3)   |
| Max       | 27379.6   | (27379.6)   |
| Area km²  | 30.64     |             |

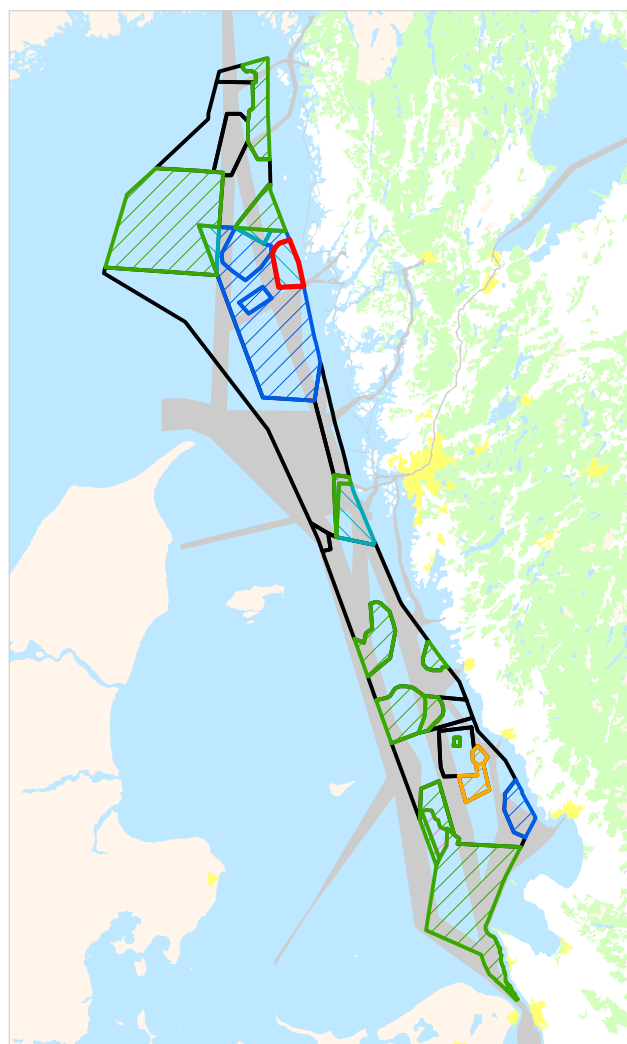
## Impacts Per Ecocomponent

| Name                    | % of Total<br>S4 | (S3)    |
|-------------------------|------------------|---------|
| Softbottom Deep         | 29.73            | (29.73) |
| Spawning Fish           | 18.07            | (18.07) |
| Porpoise Northsea       | 11.59            | (11.59) |
| Cod                     | 11.28            | (11.28) |
| Plankton Community      | 10.29            | (10.29) |
| Herring                 | 8.27             | (8.27)  |
| Harbour Seals           | 7.1              | (7.1)   |
| Transportbottom Deep    | 2.36             | (2.36)  |
| Hardbottom Aphotic      | 0.95             | (0.95)  |
| Sprat                   | 0.21             | (0.21)  |
| Eel Migration           | 0.14             | (0.14)  |
| Seabird Winter Coastal  | 0.0              | (0.0)   |
| Birds Coastal           | 0.0              | (0.0)   |
| Rivermouth Fish         | 0.0              | (0.0)   |
| Angiosperms             | 0.0              | (0.0)   |
| Shoreline Complexity    | 0.0              | (0.0)   |
| Porpoise Beltsea        | 0.0              | (0.0)   |
| Softbottom Aphotic      | 0.0              | (0.0)   |
| Softbottom Photic       | 0.0              | (0.0)   |
| Transportbottom Aphotic | 0.0              | (0.0)   |
| Transportbottom Photic  | 0.0              | (0.0)   |
| Hardbottom Deep         | 0.0              | (0.0)   |
| Hardbottom Photic       | 0.0              | (0.0)   |
| Artificial Reefs Total  | 0.0              | (0.0)   |
| Haploops Reef           | 0.0              | (0.0)   |
| Deep Reef               | 0.0              | (0.0)   |
| Mussel Reefs Total      | 0.0              | (0.0)   |
| Grey Seals              | 0.0              | (0.0)   |
| Seabird Winter Offshore | 0.0              | (0.0)   |

Calculated with SyM

Date: 2018-03-22

Medins Havs och Vattenkonsulter AB



V339\_FN

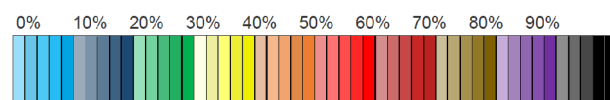
Miljöpåverkan i området jämfört med medelvärde för:

|                             |      |
|-----------------------------|------|
| S4 Västerhavet              | 79%  |
| S4 Skagerrak                | 72%  |
| S3 framtidsscenario år 2030 | 100% |

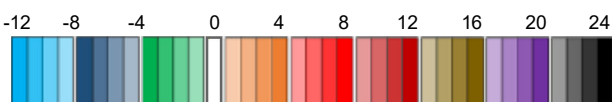
Områden och huvudanvändning



Procentuell andel av den högsta miljöpåverkan i Västerhavet, inklusive kustområden (S4)

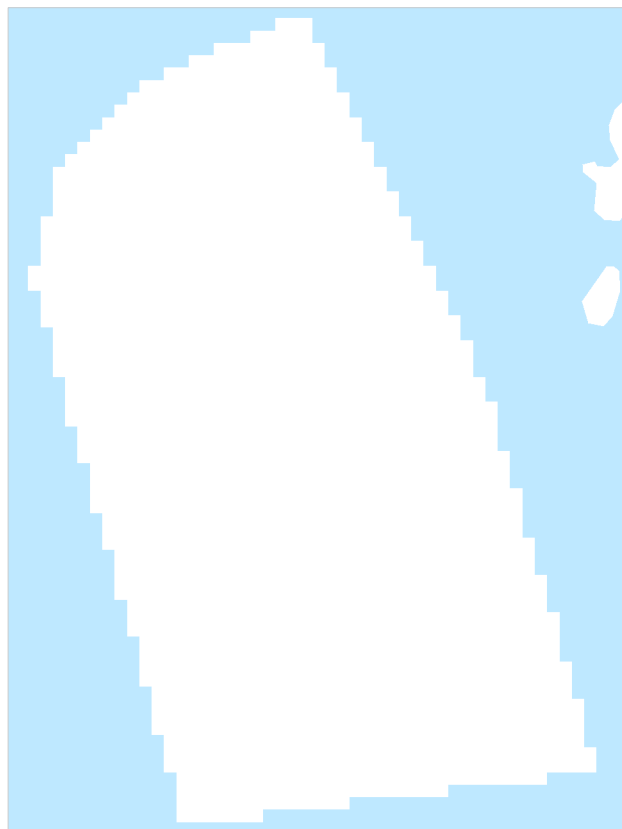


S4 plan 2030 - S3 Nollalternativ 2030.  
S4, S3 uttryckt som procentuell andel av den högsta miljöpåverkan i Västerhavet, inklusive kustområden.



S4 plan 2030

S4 plan 2030 - Nollalternativ 2030.



## Impacts Per Pressure

| Name                             | % of Total<br>S4 | (S3)    |
|----------------------------------|------------------|---------|
| Eutrophication                   |                  |         |
| Phosphorous Background           | 3.01             | (3.01)  |
| Anoxia Background                | 4.04             | (4.04)  |
| Nitrogen Background              | 29.21            | (29.21) |
| Total                            | 36.25            | (36.25) |
| General pollution                |                  |         |
| Tox Metal Background             | 0.26             | (0.26)  |
| Oilspill 2knots Wreck            | 1.42             | (1.42)  |
| Tox Synthetic Background         | 8.76             | (8.76)  |
| Tox Munition                     | 0.0              | (0.0)   |
| Tox Mine Risk                    | 0.0              | (0.0)   |
| Total                            | 10.45            | (10.45) |
| Shipping                         |                  |         |
| Turbidity Shipping               | 0.0              | (0.0)   |
| Noise 2000Hz Shipping            | 0.0              | (0.0)   |
| Oilspill 2knots Shipping         | 2.25             | (2.25)  |
| Noise 125Hz Shipping             | 5.2              | (5.2)   |
| Total                            | 7.45             | (7.45)  |
| Coastal development              |                  |         |
| Tox Synthetic Treatmentplants    | 0.0              | (0.0)   |
| Habitatloss Dumping              | 0.0              | (0.0)   |
| Infrastructure                   | 0.0              | (0.0)   |
| Habitatloss Coastal Exploitation | 0.0              | (0.0)   |
| Total                            | 0.0              | (0.0)   |
| Recreational activities          |                  |         |
| Boating Pollution                | 0.0              | (0.0)   |
| Boating Noise                    | 0.0              | (0.0)   |
| Birdhunt                         | 0.03             | (0.03)  |
| Total                            | 0.03             | (0.03)  |
| Fisheries                        |                  |         |
| Abrasion Bottomtrawl             | 20.55            | (20.55) |
| Catch Gillnet                    | 0.6              | (0.6)   |
| Turbidity Bottom trawl           | 8.53             | (8.53)  |
| Catch Bottom trawl               | 8.98             | (8.98)  |
| Catch Pelagic trawl              | 0.0              | (0.0)   |
| Total                            | 38.66            | (38.66) |
| Industry                         |                  |         |
| Tox Synthetic Industry           | 0.0              | (0.0)   |
| Tox Synthetic Harbor             | 0.0              | (0.0)   |
| Total                            | 0.0              | (0.0)   |
| Mineral mining                   |                  |         |
| Turbidity Mining                 | 0.0              | (0.0)   |
| Habitat Loss Mining              | 0.0              | (0.0)   |
| Total                            | 0.0              | (0.0)   |
| Defence                          |                  |         |
| Tox Metal Military               | 0.0              | (0.0)   |
| Explosion SPL                    | 7.17             | (7.17)  |
| Explosion PM                     | 0.0              | (0.0)   |
| Total                            | 7.17             | (7.17)  |
| Aquaculture                      |                  |         |
| Habitatloss Mussel farming       | 0.0              | (0.0)   |
| Total                            | 0.0              | (0.0)   |
| Energy                           |                  |         |
| Avoidance Windpower              | 0.0              | (0.0)   |
| Noise 125Hz Windpower            | 0.0              | (0.0)   |
| EMF                              | 0.0              | (0.0)   |
| Total                            | 0.0              | (0.0)   |

V339\_FN

## Cumulative Effect

|           | S4         | (S3)         |
|-----------|------------|--------------|
| Total     | 35852047.9 | (35852047.9) |
| Mean      | 18889.4    | (18889.4)    |
| Std. Dev. | 6168.2     | (6168.2)     |
| Min       | 8454.8     | (8454.8)     |
| Max       | 39650.9    | (39650.9)    |
| Area km²  | 118.58     |              |

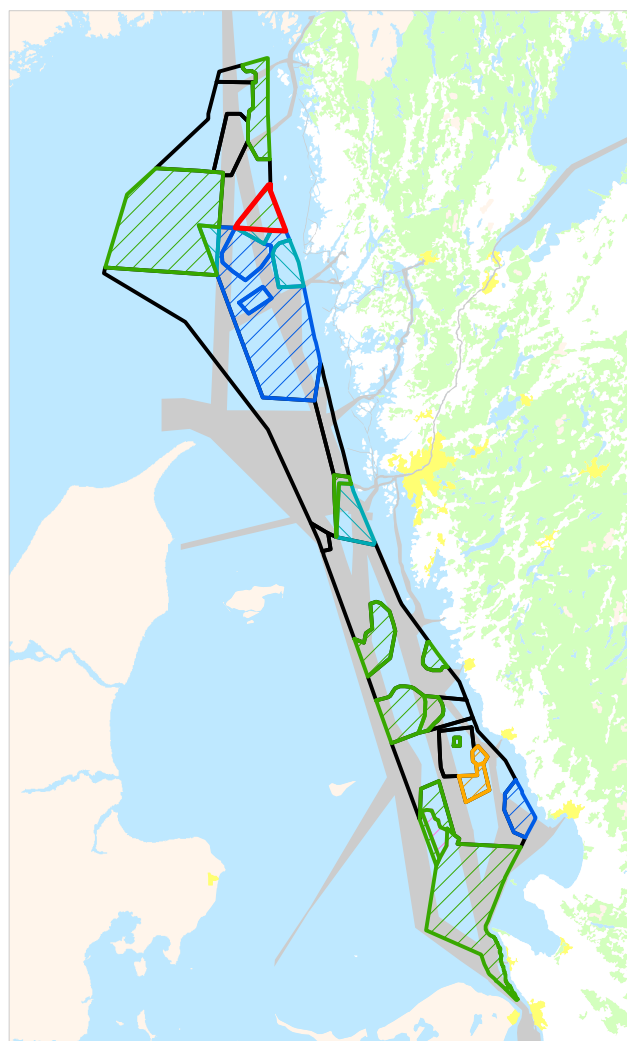
## Impacts Per Ecocomponent

| Name                    | % of Total<br>S4 | (S3)    |
|-------------------------|------------------|---------|
| Spawning Fish           | 15.55            | (15.55) |
| Softbottom Deep         | 13.58            | (13.58) |
| Porpoise Northsea       | 10.84            | (10.84) |
| Cod                     | 10.66            | (10.66) |
| Plankton Community      | 8.93             | (8.93)  |
| Herring                 | 8.3              | (8.3)   |
| Harbour Seals           | 6.73             | (6.73)  |
| Sprat                   | 6.56             | (6.56)  |
| Softbottom Aphotic      | 5.89             | (5.89)  |
| Deep Reef               | 3.51             | (3.51)  |
| Hardbottom Deep         | 2.96             | (2.96)  |
| Transportbottom Aphotic | 2.76             | (2.76)  |
| Transportbottom Deep    | 1.38             | (1.38)  |
| Hardbottom Photic       | 0.8              | (0.8)   |
| Hardbottom Aphotic      | 0.59             | (0.59)  |
| Eel Migration           | 0.38             | (0.38)  |
| Softbottom Photic       | 0.3              | (0.3)   |
| Transportbottom Photic  | 0.2              | (0.2)   |
| Seabird Winter Coastal  | 0.03             | (0.03)  |
| Birds Coastal           | 0.03             | (0.03)  |
| Mussel Reefs Total      | 0.02             | (0.02)  |
| Artificial Reefs Total  | 0.0              | (0.0)   |
| Rivermouth Fish         | 0.0              | (0.0)   |
| Porpoise Beltsea        | 0.0              | (0.0)   |
| Angiosperms             | 0.0              | (0.0)   |
| Shoreline Complexity    | 0.0              | (0.0)   |
| Haploops Reef           | 0.0              | (0.0)   |
| Grey Seals              | 0.0              | (0.0)   |
| Seabird Winter Offshore | 0.0              | (0.0)   |

Calculated with SyM

Date: 2018-03-22

Medins Havs och Vattenkonsulter AB



V340\_N

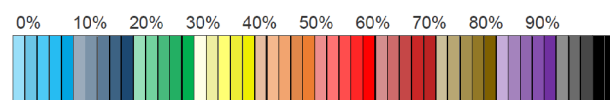
Miljöpåverkan i området jämfört med medelvärde för:

|                             |      |
|-----------------------------|------|
| S4 Västerhavet              | 75%  |
| S4 Skagerrak                | 69%  |
| S3 framtidsscenario år 2030 | 100% |

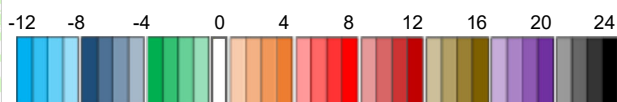
Områden och huvudanvändning



Procentuell andel av den högsta miljöpåverkan i Västerhavet, inklusive kustområden (S4)

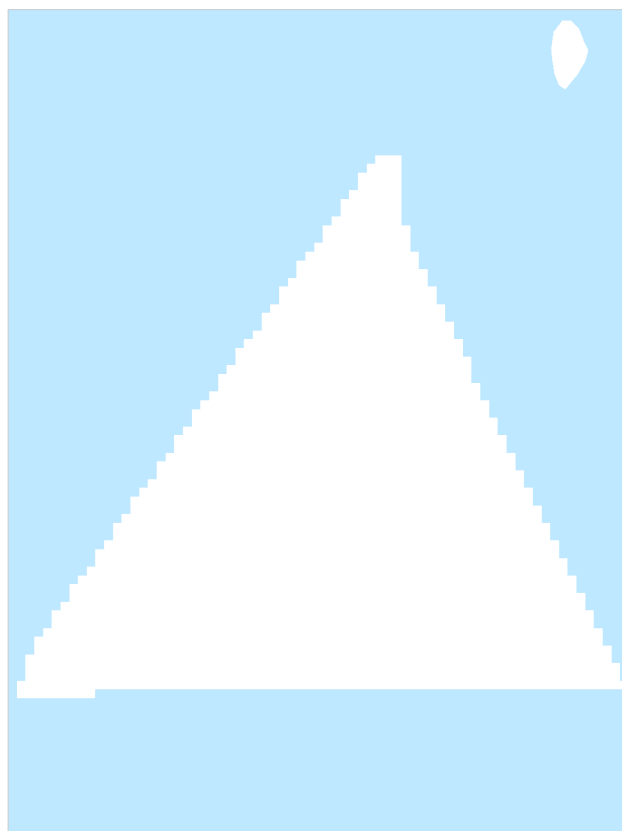
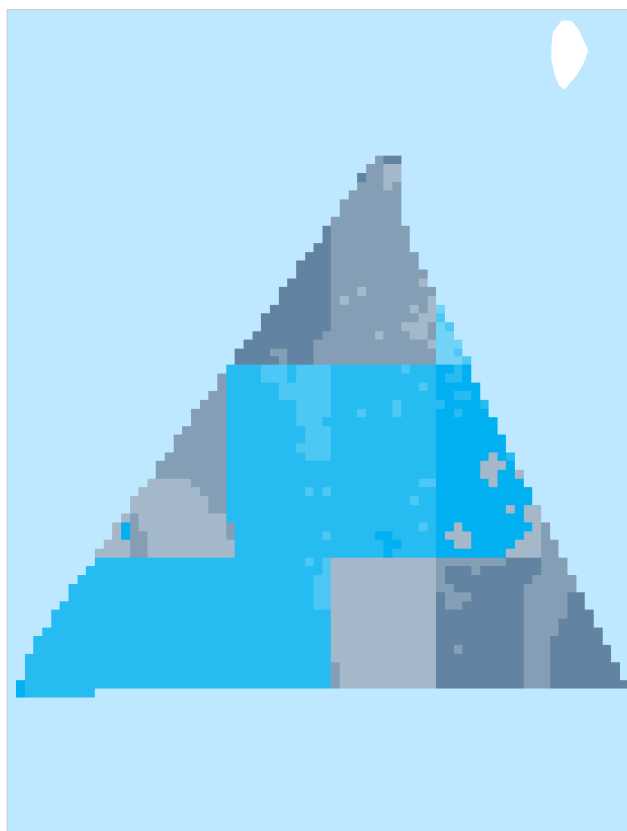


S4 plan 2030 - S3 Nollalternativ 2030.  
S4, S3 uttryckt som procentuell andel av den högsta miljöpåverkan i Västerhavet, inklusive kustområden.



S4 plan 2030

S4 plan 2030 - Nollalternativ 2030.



## Impacts Per Pressure

| Name                             | % of Total<br>S4 | (S3)    |
|----------------------------------|------------------|---------|
| Eutrophication                   |                  |         |
| Phosphorous Background           | 2.66             | (2.66)  |
| Anoxia Background                | 0.98             | (0.98)  |
| Nitrogen Background              | 28.85            | (28.85) |
| Total                            | 32.5             | (32.5)  |
| General pollution                |                  |         |
| Tox Metal Background             | 0.43             | (0.43)  |
| Oilspill 2knots Wreck            | 0.15             | (0.15)  |
| Tox Synthetic Background         | 11.51            | (11.51) |
| Tox Munition                     | 0.0              | (0.0)   |
| Tox Mine Risk                    | 0.0              | (0.0)   |
| Total                            | 12.08            | (12.08) |
| Shipping                         |                  |         |
| Turbidity Shipping               | 0.0              | (0.0)   |
| Noise 2000Hz Shipping            | 0.0              | (0.0)   |
| Oilspill 2knots Shipping         | 2.01             | (2.01)  |
| Noise 125Hz Shipping             | 8.6              | (8.6)   |
| Total                            | 10.61            | (10.61) |
| Coastal development              |                  |         |
| Tox Synthetic Treatmentplants    | 0.0              | (0.0)   |
| Habitatloss Dumping              | 0.0              | (0.0)   |
| Infrastructure                   | 0.0              | (0.0)   |
| Habitatloss Coastal Exploitation | 0.0              | (0.0)   |
| Total                            | 0.0              | (0.0)   |
| Recreational activities          |                  |         |
| Boating Pollution                | 0.0              | (0.0)   |
| Boating Noise                    | 0.0              | (0.0)   |
| Birdhunt                         | 0.0              | (0.0)   |
| Total                            | 0.0              | (0.0)   |
| Fisheries                        |                  |         |
| Abrasion Bottomtrawl             | 24.16            | (24.16) |
| Catch Gillnet                    | 0.0              | (0.0)   |
| Turbidity Bottom trawl           | 9.61             | (9.61)  |
| Catch Bottom trawl               | 11.04            | (11.04) |
| Catch Pelagic trawl              | 0.0              | (0.0)   |
| Total                            | 44.81            | (44.81) |
| Industry                         |                  |         |
| Tox Synthetic Industry           | 0.0              | (0.0)   |
| Tox Synthetic Harbor             | 0.0              | (0.0)   |
| Total                            | 0.0              | (0.0)   |
| Mineral mining                   |                  |         |
| Turbidity Mining                 | 0.0              | (0.0)   |
| Habitat Loss Mining              | 0.0              | (0.0)   |
| Total                            | 0.0              | (0.0)   |
| Defence                          |                  |         |
| Tox Metal Military               | 0.0              | (0.0)   |
| Explosion SPL                    | 0.0              | (0.0)   |
| Explosion PM                     | 0.0              | (0.0)   |
| Total                            | 0.0              | (0.0)   |
| Aquaculture                      |                  |         |
| Habitatloss Mussel farming       | 0.0              | (0.0)   |
| Total                            | 0.0              | (0.0)   |
| Energy                           |                  |         |
| Avoidance Windpower              | 0.0              | (0.0)   |
| Noise 125Hz Windpower            | 0.0              | (0.0)   |
| EMF                              | 0.0              | (0.0)   |
| Total                            | 0.0              | (0.0)   |

V340\_N

## Cumulative Effect

|           | S4         | (S3)         |
|-----------|------------|--------------|
| Total     | 39012162.3 | (39012162.3) |
| Mean      | 18002.8    | (18002.8)    |
| Std. Dev. | 6098.1     | (6098.1)     |
| Min       | 5259.7     | (5259.7)     |
| Max       | 29585.8    | (29585.8)    |
| Area km²  | 135.48     |              |

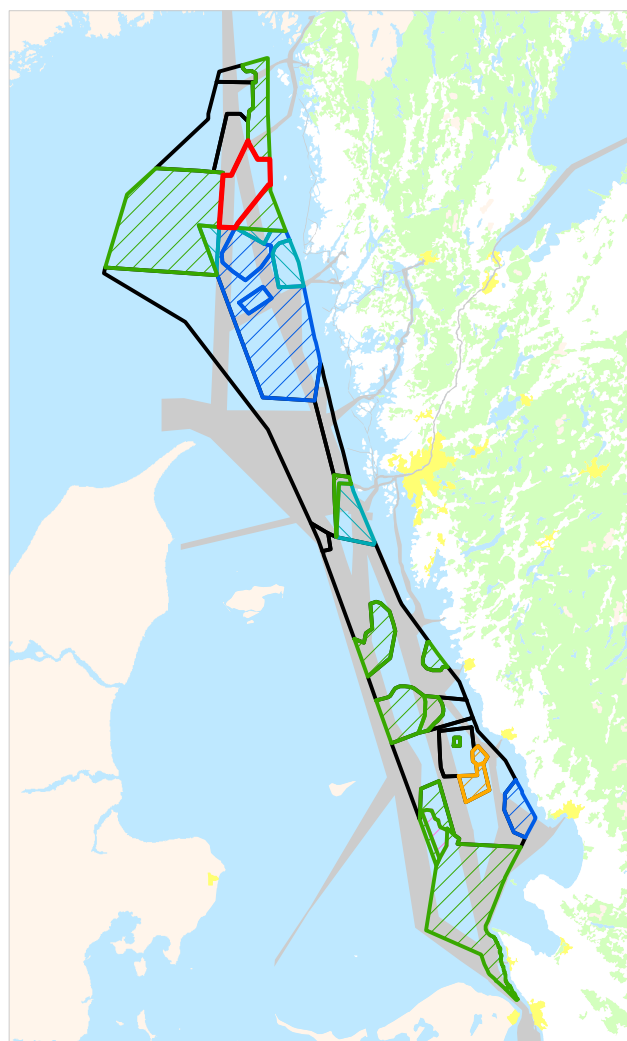
## Impacts Per Ecocomponent

| Name                    | % of Total<br>S4 | (S3)    |
|-------------------------|------------------|---------|
| Softbottom Deep         | 21.3             | (21.3)  |
| Spawning Fish           | 19.17            | (19.17) |
| Cod                     | 11.11            | (11.11) |
| Porpoise Northsea       | 10.47            | (10.47) |
| Plankton Community      | 9.52             | (9.52)  |
| Harbour Seals           | 7.81             | (7.81)  |
| Herring                 | 6.22             | (6.22)  |
| Softbottom Aphotic      | 4.21             | (4.21)  |
| Transportbottom Deep    | 2.88             | (2.88)  |
| Hardbottom Aphotic      | 2.73             | (2.73)  |
| Hardbottom Deep         | 1.93             | (1.93)  |
| Sprat                   | 1.59             | (1.59)  |
| Transportbottom Aphotic | 0.8              | (0.8)   |
| Eel Migration           | 0.2              | (0.2)   |
| Hardbottom Photic       | 0.04             | (0.04)  |
| Transportbottom Photic  | 0.01             | (0.01)  |
| Softbottom Photic       | 0.01             | (0.01)  |
| Artificial Reefs Total  | 0.0              | (0.0)   |
| Rivermouth Fish         | 0.0              | (0.0)   |
| Birds Coastal           | 0.0              | (0.0)   |
| Seabird Winter Coastal  | 0.0              | (0.0)   |
| Porpoise Beltsea        | 0.0              | (0.0)   |
| Angiosperms             | 0.0              | (0.0)   |
| Shoreline Complexity    | 0.0              | (0.0)   |
| Haploops Reef           | 0.0              | (0.0)   |
| Deep Reef               | 0.0              | (0.0)   |
| Mussel Reefs Total      | 0.0              | (0.0)   |
| Grey Seals              | 0.0              | (0.0)   |
| Seabird Winter Offshore | 0.0              | (0.0)   |

Calculated with SyM

Date: 2018-03-22

Medins Havs och Vattenkonsulter AB



V341\_G

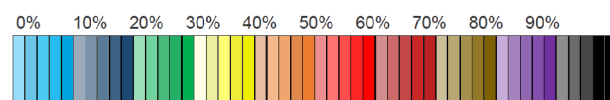
Miljöpåverkan i området jämfört med medelvärde för:

|                             |      |
|-----------------------------|------|
| S4 Västerhavet              | 101% |
| S4 Skagerrak                | 92%  |
| S3 framtidsscenario år 2030 | 100% |

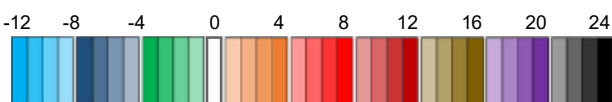
Områden och huvudanvändning



Procentuell andel av den högsta miljöpåverkan i Västerhavet, inklusive kustområden (S4)

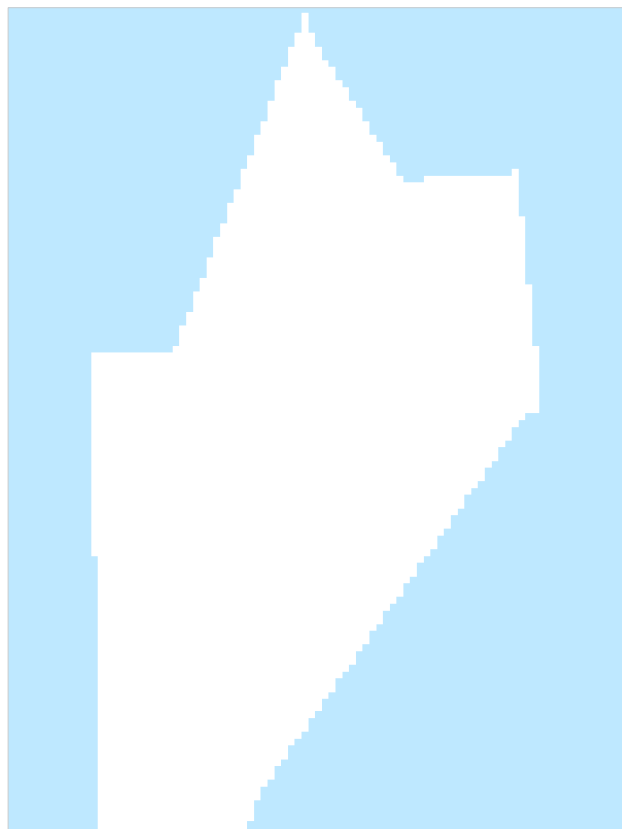
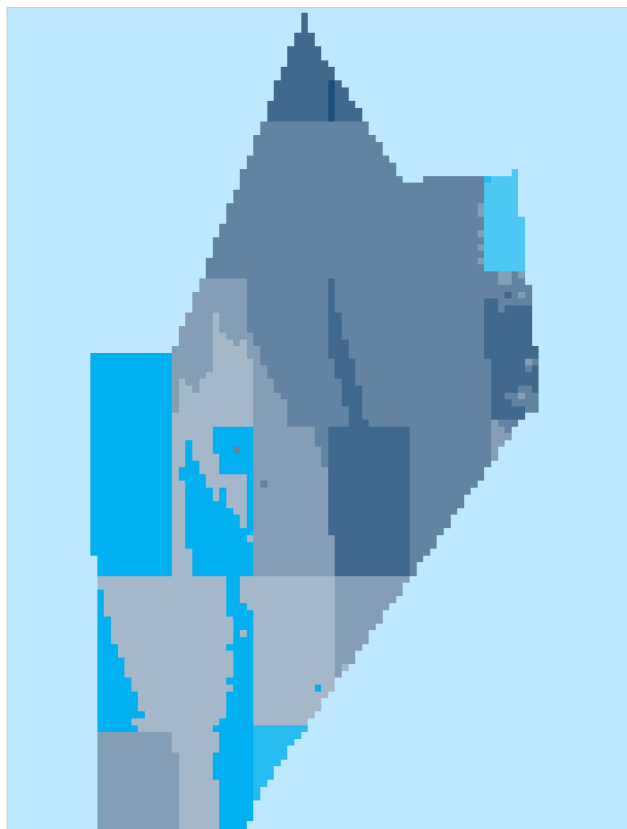


S4 plan 2030 - S3 Nollalternativ 2030.  
S4, S3 uttryckt som procentuell andel av den högsta miljöpåverkan i Västerhavet, inklusive kustområden.



S4 plan 2030

S4 plan 2030 - Nollalternativ 2030.



## Impacts Per Pressure

| Name                             | % of Total<br>S4 | (S3)    |
|----------------------------------|------------------|---------|
| Eutrophication                   |                  |         |
| Phosphorous Background           | 2.18             | (2.18)  |
| Anoxia Background                | 0.13             | (0.13)  |
| Nitrogen Background              | 20.83            | (20.83) |
| Total                            | 23.14            | (23.14) |
| General pollution                |                  |         |
| Tox Metal Background             | 0.0              | (0.0)   |
| Oilspill 2knots Wreck            | 0.0              | (0.0)   |
| Tox Synthetic Background         | 12.6             | (12.6)  |
| Tox Munition                     | 0.0              | (0.0)   |
| Tox Mine Risk                    | 0.0              | (0.0)   |
| Total                            | 12.6             | (12.6)  |
| Shipping                         |                  |         |
| Turbidity Shipping               | 0.0              | (0.0)   |
| Noise 2000Hz Shipping            | 0.0              | (0.0)   |
| Oilspill 2knots Shipping         | 1.34             | (1.34)  |
| Noise 125Hz Shipping             | 7.34             | (7.34)  |
| Total                            | 8.68             | (8.68)  |
| Coastal development              |                  |         |
| Tox Synthetic Treatmentplants    | 0.0              | (0.0)   |
| Habitatloss Dumping              | 0.0              | (0.0)   |
| Infrastructure                   | 0.0              | (0.0)   |
| Habitatloss Coastal Exploitation | 0.0              | (0.0)   |
| Total                            | 0.0              | (0.0)   |
| Recreational activities          |                  |         |
| Boating Pollution                | 0.0              | (0.0)   |
| Boating Noise                    | 0.0              | (0.0)   |
| Birdhunt                         | 0.01             | (0.01)  |
| Total                            | 0.01             | (0.01)  |
| Fisheries                        |                  |         |
| Abrasion Bottomtrawl             | 29.33            | (29.33) |
| Catch Gillnet                    | 0.0              | (0.0)   |
| Turbidity Bottom trawl           | 12.08            | (12.08) |
| Catch Bottom trawl               | 14.16            | (14.16) |
| Catch Pelagic trawl              | 0.0              | (0.0)   |
| Total                            | 55.57            | (55.57) |
| Industry                         |                  |         |
| Tox Synthetic Industry           | 0.0              | (0.0)   |
| Tox Synthetic Harbor             | 0.0              | (0.0)   |
| Total                            | 0.0              | (0.0)   |
| Mineral mining                   |                  |         |
| Turbidity Mining                 | 0.0              | (0.0)   |
| Habitat Loss Mining              | 0.0              | (0.0)   |
| Total                            | 0.0              | (0.0)   |
| Defence                          |                  |         |
| Tox Metal Military               | 0.0              | (0.0)   |
| Explosion SPL                    | 0.0              | (0.0)   |
| Explosion PM                     | 0.0              | (0.0)   |
| Total                            | 0.0              | (0.0)   |
| Aquaculture                      |                  |         |
| Habitatloss Mussel farming       | 0.0              | (0.0)   |
| Total                            | 0.0              | (0.0)   |
| Energy                           |                  |         |
| Avoidance Windpower              | 0.0              | (0.0)   |
| Noise 125Hz Windpower            | 0.0              | (0.0)   |
| EMF                              | 0.0              | (0.0)   |
| Total                            | 0.0              | (0.0)   |

V341\_G

## Cumulative Effect

|           | S4          | (S3)          |
|-----------|-------------|---------------|
| Total     | 113511753.6 | (113511753.6) |
| Mean      | 24254.6     | (24254.6)     |
| Std. Dev. | 5805.3      | (5805.3)      |
| Min       | 7038.7      | (7038.7)      |
| Max       | 34541.0     | (34541.0)     |
| Area km²  | 292.41      |               |

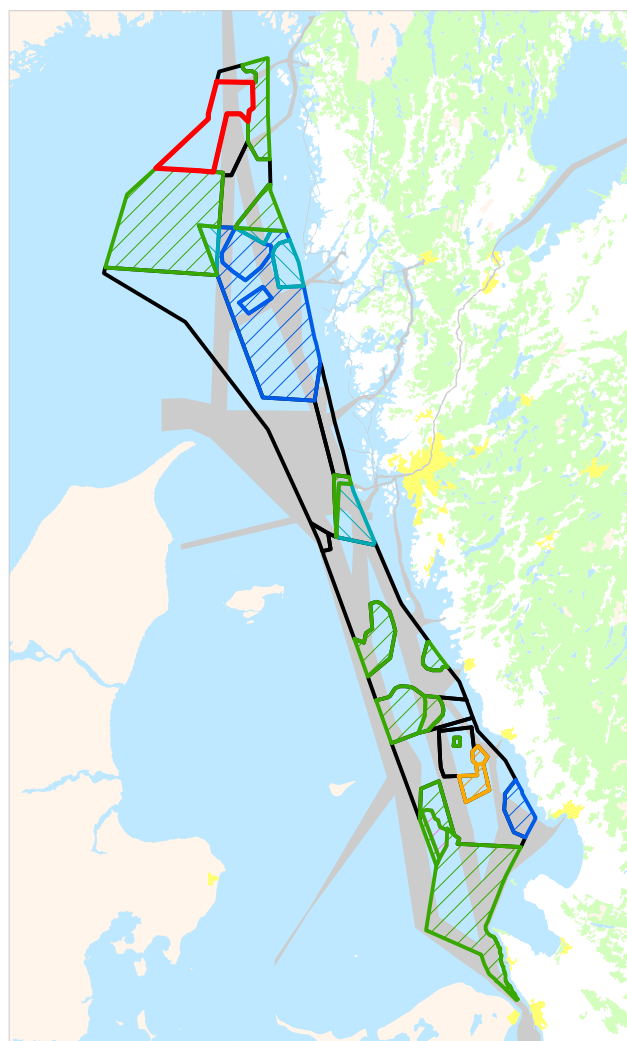
## Impacts Per Ecocomponent

| Name                    | % of Total<br>S4 | (S3)    |
|-------------------------|------------------|---------|
| Softbottom Deep         | 36.74            | (36.74) |
| Spawning Fish           | 19.83            | (19.83) |
| Cod                     | 11.99            | (11.99) |
| Porpoise Northsea       | 10.2             | (10.2)  |
| Plankton Community      | 9.3              | (9.3)   |
| Harbour Seals           | 8.35             | (8.35)  |
| Herring                 | 1.77             | (1.77)  |
| Transportbottom Deep    | 0.52             | (0.52)  |
| Softbottom Aphotic      | 0.38             | (0.38)  |
| Hardbottom Deep         | 0.36             | (0.36)  |
| Hardbottom Aphotic      | 0.28             | (0.28)  |
| Transportbottom Aphotic | 0.13             | (0.13)  |
| Eel Migration           | 0.08             | (0.08)  |
| Sprat                   | 0.04             | (0.04)  |
| Birds Coastal           | 0.02             | (0.02)  |
| Hardbottom Photic       | 0.01             | (0.01)  |
| Artificial Reefs Total  | 0.0              | (0.0)   |
| Haploops Reef           | 0.0              | (0.0)   |
| Mussel Reefs Total      | 0.0              | (0.0)   |
| Transportbottom Photic  | 0.0              | (0.0)   |
| Softbottom Photic       | 0.0              | (0.0)   |
| Rivermouth Fish         | 0.0              | (0.0)   |
| Seabird Winter Coastal  | 0.0              | (0.0)   |
| Porpoise Beltsea        | 0.0              | (0.0)   |
| Angiosperms             | 0.0              | (0.0)   |
| Shoreline Complexity    | 0.0              | (0.0)   |
| Deep Reef               | 0.0              | (0.0)   |
| Grey Seals              | 0.0              | (0.0)   |
| Seabird Winter Offshore | 0.0              | (0.0)   |

Calculated with SyM

Date: 2018-03-22

Medins Havs och Vattenkonsulter AB



V342\_G

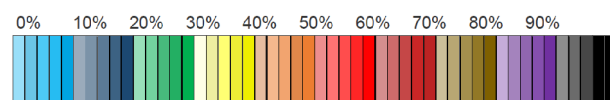
Miljöpåverkan i området jämfört med medelvärde för:

|                             |      |
|-----------------------------|------|
| S4 Västerhavet              | 105% |
| S4 Skagerrak                | 96%  |
| S3 framtidsscenario år 2030 | 100% |

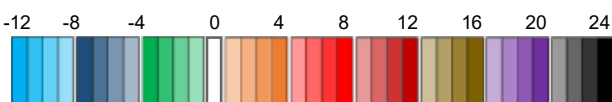
Områden och huvudanvändning



Procentuell andel av den högsta miljöpåverkan i Västerhavet, inklusive kustområden (S4)

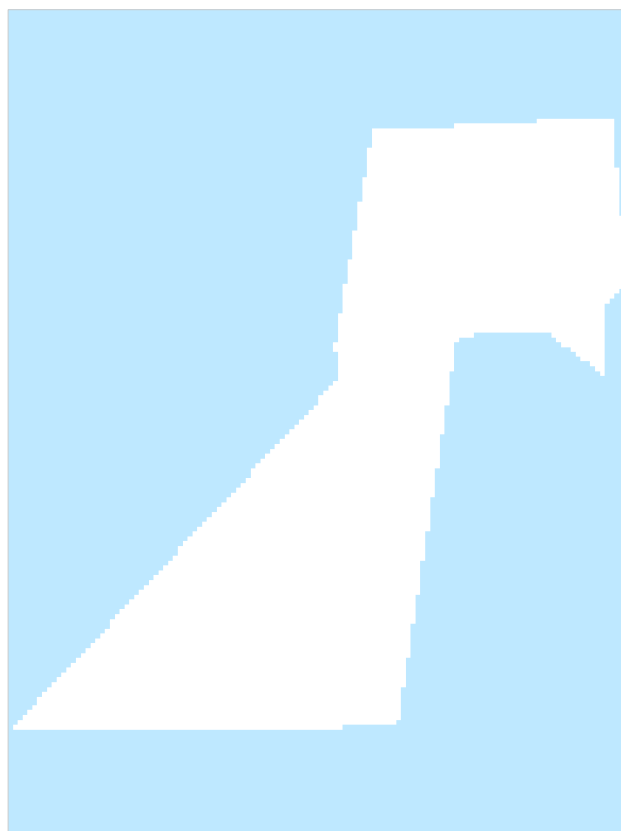
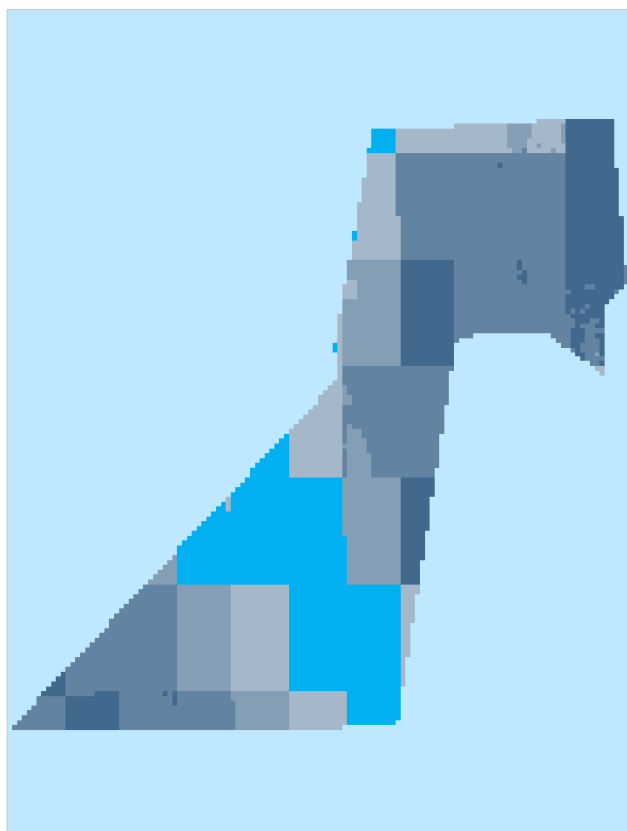


S4 plan 2030 - S3 Nollalternativ 2030.  
S4, S3 uttryckt som procentuell andel av den högsta miljöpåverkan i Västerhavet, inklusive kustområden.



S4 plan 2030

S4 plan 2030 - Nollalternativ 2030.



## Impacts Per Pressure

| Name                             | % of Total<br>S4 | (S3)    |
|----------------------------------|------------------|---------|
| Eutrophication                   |                  |         |
| Phosphorous Background           | 1.96             | (1.96)  |
| Anoxia Background                | 0.14             | (0.14)  |
| Nitrogen Background              | 19.08            | (19.08) |
| Total                            | 21.17            | (21.17) |
| General pollution                |                  |         |
| Tox Metal Background             | 1.53             | (1.53)  |
| Oilspill 2knots Wreck            | 0.0              | (0.0)   |
| Tox Synthetic Background         | 14.36            | (14.36) |
| Tox Munition                     | 0.0              | (0.0)   |
| Tox Mine Risk                    | 0.0              | (0.0)   |
| Total                            | 15.89            | (15.89) |
| Shipping                         |                  |         |
| Turbidity Shipping               | 0.0              | (0.0)   |
| Noise 2000Hz Shipping            | 0.0              | (0.0)   |
| Oilspill 2knots Shipping         | 0.96             | (0.96)  |
| Noise 125Hz Shipping             | 5.9              | (5.9)   |
| Total                            | 6.86             | (6.86)  |
| Coastal development              |                  |         |
| Tox Synthetic Treatmentplants    | 0.0              | (0.0)   |
| Habitatloss Dumping              | 0.0              | (0.0)   |
| Infrastructure                   | 0.0              | (0.0)   |
| Habitatloss Coastal Exploitation | 0.0              | (0.0)   |
| Total                            | 0.0              | (0.0)   |
| Recreational activities          |                  |         |
| Boating Pollution                | 0.0              | (0.0)   |
| Boating Noise                    | 0.0              | (0.0)   |
| Birdhunt                         | 0.0              | (0.0)   |
| Total                            | 0.0              | (0.0)   |
| Fisheries                        |                  |         |
| Abrasion Bottomtrawl             | 29.4             | (29.4)  |
| Catch Gillnet                    | 0.0              | (0.0)   |
| Turbidity Bottom trawl           | 12.11            | (12.11) |
| Catch Bottom trawl               | 14.57            | (14.57) |
| Catch Pelagic trawl              | 0.0              | (0.0)   |
| Total                            | 56.07            | (56.07) |
| Industry                         |                  |         |
| Tox Synthetic Industry           | 0.0              | (0.0)   |
| Tox Synthetic Harbor             | 0.0              | (0.0)   |
| Total                            | 0.0              | (0.0)   |
| Mineral mining                   |                  |         |
| Turbidity Mining                 | 0.0              | (0.0)   |
| Habitat Loss Mining              | 0.0              | (0.0)   |
| Total                            | 0.0              | (0.0)   |
| Defence                          |                  |         |
| Tox Metal Military               | 0.0              | (0.0)   |
| Explosion SPL                    | 0.0              | (0.0)   |
| Explosion PM                     | 0.0              | (0.0)   |
| Total                            | 0.0              | (0.0)   |
| Aquaculture                      |                  |         |
| Habitatloss Mussel farming       | 0.0              | (0.0)   |
| Total                            | 0.0              | (0.0)   |
| Energy                           |                  |         |
| Avoidance Windpower              | 0.0              | (0.0)   |
| Noise 125Hz Windpower            | 0.0              | (0.0)   |
| EMF                              | 0.0              | (0.0)   |
| Total                            | 0.0              | (0.0)   |

V342\_G

## Cumulative Effect

|           | S4          | (S3)          |
|-----------|-------------|---------------|
| Total     | 158877312.0 | (158877312.0) |
| Mean      | 25091.2     | (25091.2)     |
| Std. Dev. | 5345.4      | (5345.4)      |
| Min       | 15173.0     | (15173.0)     |
| Max       | 33941.5     | (33941.5)     |
| Area km²  | 394.88      |               |

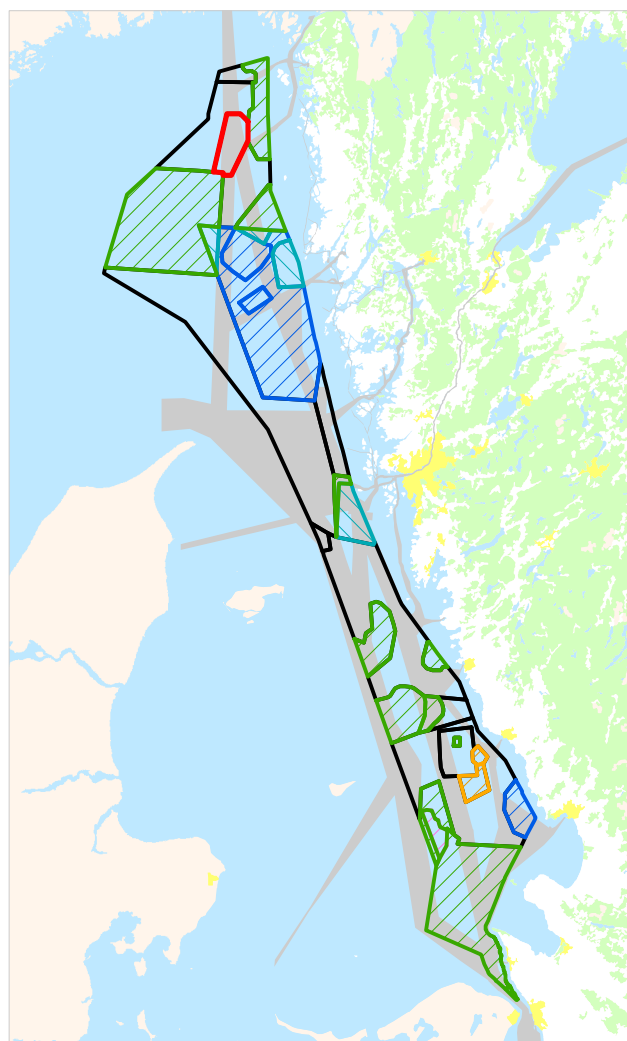
## Impacts Per Ecocomponent

| Name                    | % of Total<br>S4 | (S3)    |
|-------------------------|------------------|---------|
| Softbottom Deep         | 39.23            | (39.23) |
| Spawning Fish           | 20.32            | (20.32) |
| Cod                     | 12.32            | (12.32) |
| Porpoise Northsea       | 10.25            | (10.25) |
| Plankton Community      | 9.99             | (9.99)  |
| Harbour Seals           | 6.66             | (6.66)  |
| Transportbottom Deep    | 0.62             | (0.62)  |
| Hardbottom Aphotic      | 0.44             | (0.44)  |
| Herring                 | 0.12             | (0.12)  |
| Eel Migration           | 0.03             | (0.03)  |
| Hardbottom Deep         | 0.01             | (0.01)  |
| Transportbottom Aphotic | 0.0              | (0.0)   |
| Mussel Reefs Total      | 0.0              | (0.0)   |
| Softbottom Aphotic      | 0.0              | (0.0)   |
| Birds Coastal           | 0.0              | (0.0)   |
| Rivermouth Fish         | 0.0              | (0.0)   |
| Angiosperms             | 0.0              | (0.0)   |
| Sprat                   | 0.0              | (0.0)   |
| Seabird Winter Coastal  | 0.0              | (0.0)   |
| Porpoise Beltsea        | 0.0              | (0.0)   |
| Shoreline Complexity    | 0.0              | (0.0)   |
| Softbottom Photic       | 0.0              | (0.0)   |
| Transportbottom Photic  | 0.0              | (0.0)   |
| Hardbottom Photic       | 0.0              | (0.0)   |
| Artificial Reefs Total  | 0.0              | (0.0)   |
| Haploops Reef           | 0.0              | (0.0)   |
| Deep Reef               | 0.0              | (0.0)   |
| Grey Seals              | 0.0              | (0.0)   |
| Seabird Winter Offshore | 0.0              | (0.0)   |

Calculated with SyM

Date: 2018-03-22

Medins Havs och Vattenkonsulter AB



V343\_Gn

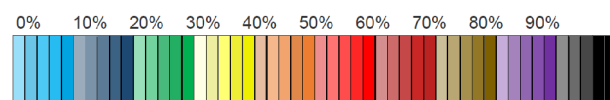
Miljöpåverkan i området jämfört med medelvärde för:

|                             |      |
|-----------------------------|------|
| S4 Västerhavet              | 103% |
| S4 Skagerrak                | 94%  |
| S3 framtidsscenario år 2030 | 93%  |

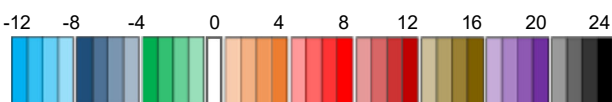
Områden och huvudanvändning



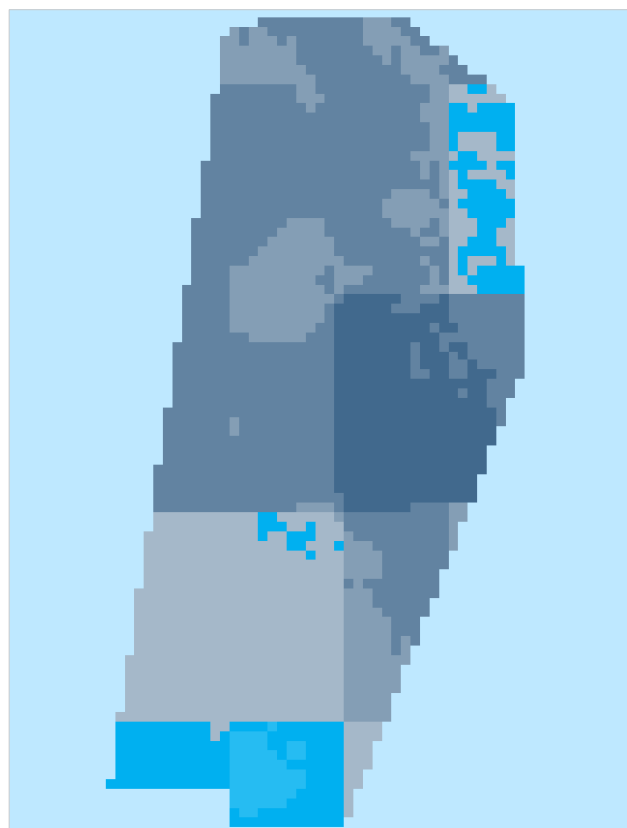
Procentuell andel av den högsta miljöpåverkan i Västerhavet, inklusive kustområden (S4)



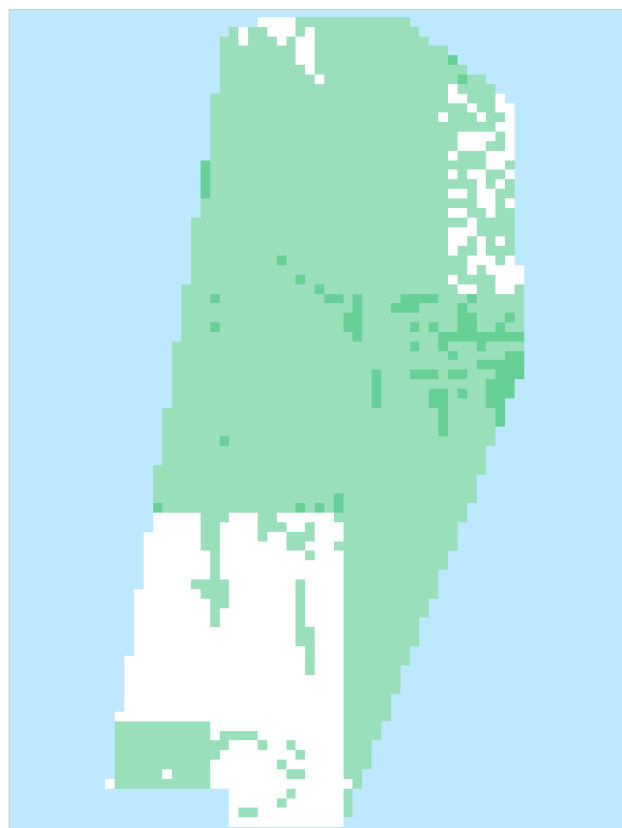
S4 plan 2030 - S3 Nollalternativ 2030.  
S4, S3 uttryckt som procentuell andel av den högsta miljöpåverkan i Västerhavet, inklusive kustområden.



S4 plan 2030



S4 plan 2030 - Nollalternativ 2030.



## Impacts Per Pressure

| Name                             | % of Total<br>S4 | (S3)    |
|----------------------------------|------------------|---------|
| Eutrophication                   |                  |         |
| Phosphorous Background           | 2.09             | (1.96)  |
| Anoxia Background                | 0.05             | (0.05)  |
| Nitrogen Background              | 19.8             | (18.5)  |
| Total                            | 21.95            | (20.51) |
| General pollution                |                  |         |
| Tox Metal Background             | 0.22             | (0.21)  |
| Oilspill 2knots Wreck            | 0.0              | (0.0)   |
| Tox Synthetic Background         | 13.13            | (12.27) |
| Tox Munition                     | 0.0              | (0.0)   |
| Tox Mine Risk                    | 0.0              | (0.0)   |
| Total                            | 13.35            | (12.47) |
| Shipping                         |                  |         |
| Turbidity Shipping               | 0.0              | (0.0)   |
| Noise 2000Hz Shipping            | 0.0              | (0.0)   |
| Oilspill 2knots Shipping         | 1.29             | (1.2)   |
| Noise 125Hz Shipping             | 8.4              | (7.85)  |
| Total                            | 9.69             | (9.05)  |
| Coastal development              |                  |         |
| Tox Synthetic Treatmentplants    | 0.0              | (0.0)   |
| Habitatloss Dumping              | 0.0              | (0.0)   |
| Infrastructure                   | 0.0              | (0.0)   |
| Habitatloss Coastal Exploitation | 0.0              | (0.0)   |
| Total                            | 0.0              | (0.0)   |
| Recreational activities          |                  |         |
| Boating Pollution                | 0.0              | (0.0)   |
| Boating Noise                    | 0.0              | (0.0)   |
| Birdhunt                         | 0.0              | (0.0)   |
| Total                            | 0.0              | (0.0)   |
| Fisheries                        |                  |         |
| Abrasion Bottomtrawl             | 32.37            | (30.25) |
| Catch Gillnet                    | 0.0              | (0.0)   |
| Turbidity Bottom trawl           | 13.48            | (12.59) |
| Catch Bottom trawl               | 9.16             | (15.12) |
| Catch Pelagic trawl              | 0.0              | (0.0)   |
| Total                            | 55.01            | (57.96) |
| Industry                         |                  |         |
| Tox Synthetic Industry           | 0.0              | (0.0)   |
| Tox Synthetic Harbor             | 0.0              | (0.0)   |
| Total                            | 0.0              | (0.0)   |
| Mineral mining                   |                  |         |
| Turbidity Mining                 | 0.0              | (0.0)   |
| Habitat Loss Mining              | 0.0              | (0.0)   |
| Total                            | 0.0              | (0.0)   |
| Defence                          |                  |         |
| Tox Metal Military               | 0.0              | (0.0)   |
| Explosion SPL                    | 0.0              | (0.0)   |
| Explosion PM                     | 0.0              | (0.0)   |
| Total                            | 0.0              | (0.0)   |
| Aquaculture                      |                  |         |
| Habitatloss Mussel farming       | 0.0              | (0.0)   |
| Total                            | 0.0              | (0.0)   |
| Energy                           |                  |         |
| Avoidance Windpower              | 0.0              | (0.0)   |
| Noise 125Hz Windpower            | 0.0              | (0.0)   |
| EMF                              | 0.0              | (0.0)   |
| Total                            | 0.0              | (0.0)   |

V343\_Gn

## Cumulative Effect

|           | S4         | (S3)         |
|-----------|------------|--------------|
| Total     | 64722236.2 | (69266867.9) |
| Mean      | 24750.4    | (26488.3)    |
| Std. Dev. | 4814.3     | (5501.2)     |
| Min       | 13188.8    | (13569.6)    |
| Max       | 31974.4    | (34703.6)    |
| Area km²  | 163.43     |              |

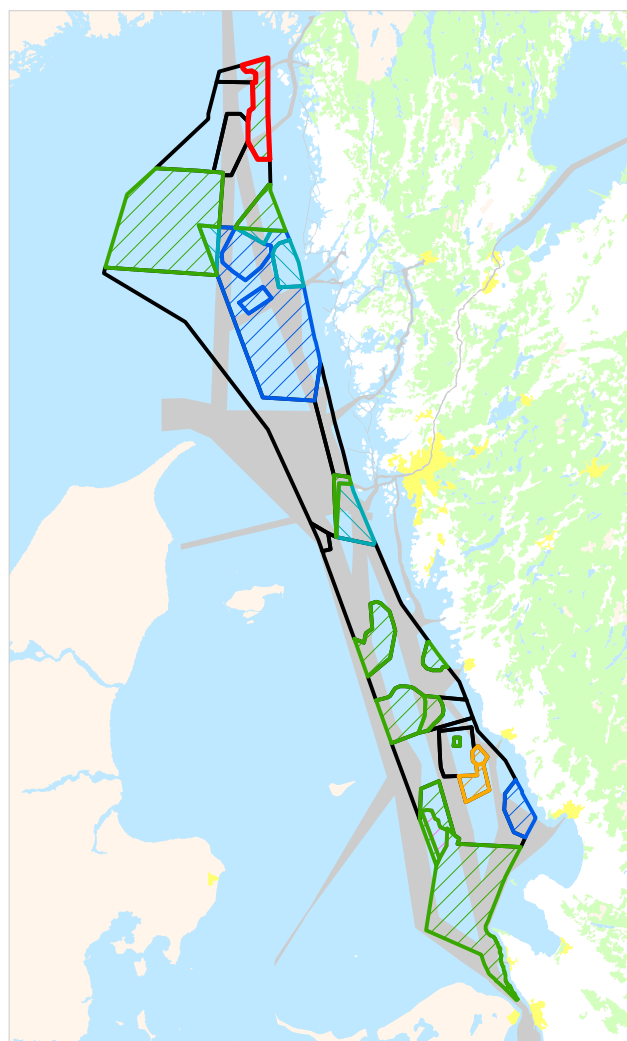
## Impacts Per Ecocomponent

| Name                    | % of Total<br>S4 | (S3)    |
|-------------------------|------------------|---------|
| Softbottom Deep         | 34.67            | (34.64) |
| Spawning Fish           | 18.82            | (20.12) |
| Cod                     | 13.23            | (12.36) |
| Porpoise Northsea       | 10.47            | (11.23) |
| Plankton Community      | 9.59             | (8.96)  |
| Harbour Seals           | 9.24             | (8.63)  |
| Hardbottom Aphotic      | 2.13             | (2.15)  |
| Transportbottom Deep    | 1.51             | (1.55)  |
| Hardbottom Deep         | 0.15             | (0.15)  |
| Herring                 | 0.11             | (0.12)  |
| Transportbottom Aphotic | 0.04             | (0.04)  |
| Softbottom Aphotic      | 0.03             | (0.03)  |
| Eel Migration           | 0.02             | (0.02)  |
| Rivermouth Fish         | 0.0              | (0.0)   |
| Angiosperms             | 0.0              | (0.0)   |
| Birds Coastal           | 0.0              | (0.0)   |
| Seabird Winter Coastal  | 0.0              | (0.0)   |
| Sprat                   | 0.0              | (0.0)   |
| Porpoise Beltsea        | 0.0              | (0.0)   |
| Shoreline Complexity    | 0.0              | (0.0)   |
| Softbottom Photic       | 0.0              | (0.0)   |
| Transportbottom Photic  | 0.0              | (0.0)   |
| Hardbottom Photic       | 0.0              | (0.0)   |
| Artificial Reefs Total  | 0.0              | (0.0)   |
| Haploops Reef           | 0.0              | (0.0)   |
| Deep Reef               | 0.0              | (0.0)   |
| Mussel Reefs Total      | 0.0              | (0.0)   |
| Grey Seals              | 0.0              | (0.0)   |
| Seabird Winter Offshore | 0.0              | (0.0)   |

Calculated with SyM

Date: 2018-03-22

Medins Havs och Vattenkonsulter AB



V344\_N

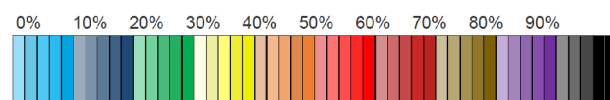
Miljöpåverkan i området jämfört med medelvärde för:

|                             |      |
|-----------------------------|------|
| S4 Västerhavet              | 92%  |
| S4 Skagerrak                | 84%  |
| S3 framtidsscenario år 2030 | 100% |

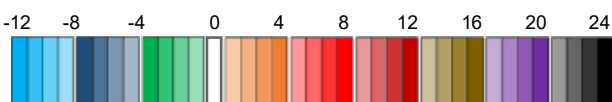
Områden och huvudanvändning



Procentuell andel av den högsta miljöpåverkan i Västerhavet, inklusive kustområden (S4)

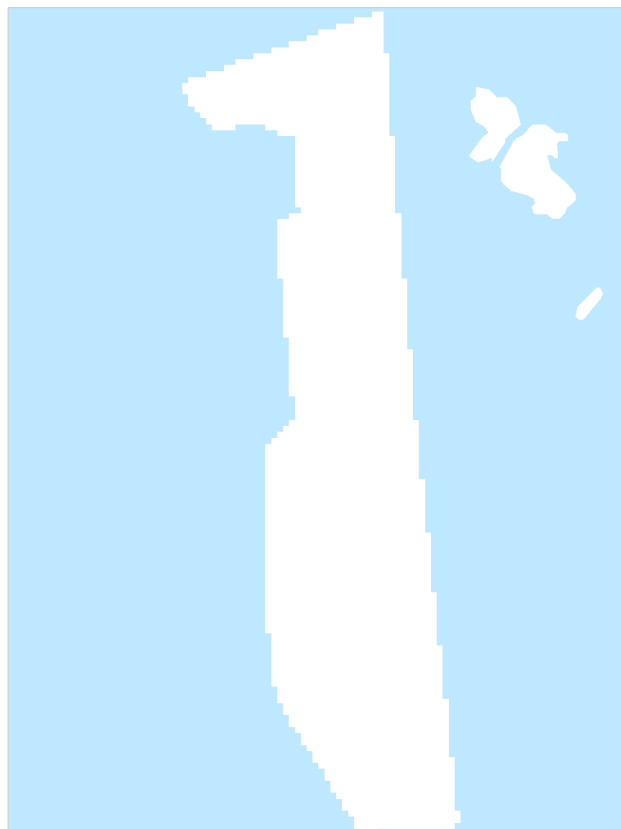
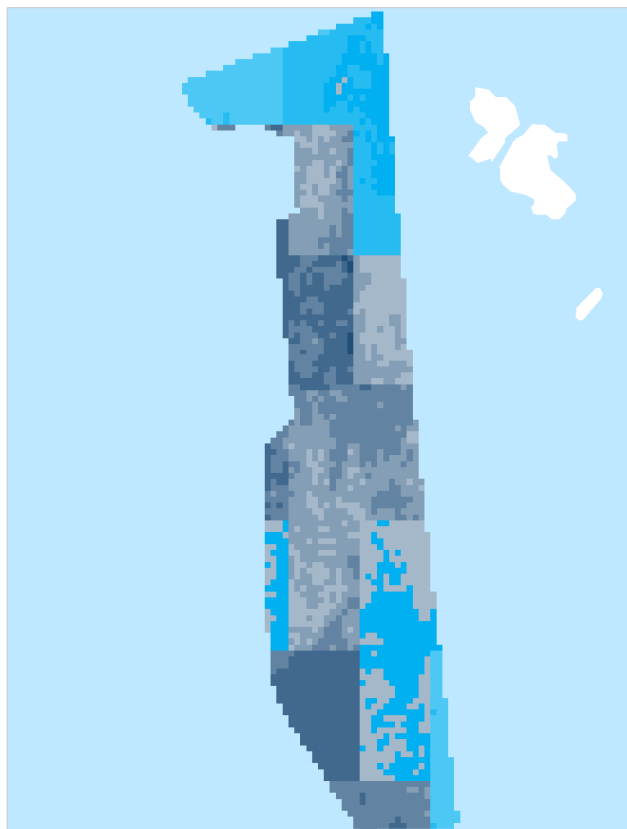


S4 plan 2030 - S3 Nollalternativ 2030.  
S4, S3 uttryckt som procentuell andel av den högsta miljöpåverkan i Västerhavet, inklusive kustområden.



S4 plan 2030

S4 plan 2030 - Nollalternativ 2030.



## Impacts Per Pressure

| Name                             | % of Total<br>S4 | (S3)    |
|----------------------------------|------------------|---------|
| Eutrophication                   |                  |         |
| Phosphorous Background           | 2.12             | (2.12)  |
| Anoxia Background                | 1.92             | (1.92)  |
| Nitrogen Background              | 21.5             | (21.5)  |
| Total                            | 25.55            | (25.55) |
| General pollution                |                  |         |
| Tox Metal Background             | 0.06             | (0.06)  |
| Oilspill 2knots Wreck            | 0.0              | (0.0)   |
| Tox Synthetic Background         | 7.5              | (7.5)   |
| Tox Munition                     | 0.0              | (0.0)   |
| Tox Mine Risk                    | 0.0              | (0.0)   |
| Total                            | 7.56             | (7.56)  |
| Shipping                         |                  |         |
| Turbidity Shipping               | 0.0              | (0.0)   |
| Noise 2000Hz Shipping            | 0.0              | (0.0)   |
| Oilspill 2knots Shipping         | 0.91             | (0.91)  |
| Noise 125Hz Shipping             | 10.88            | (10.88) |
| Total                            | 11.79            | (11.79) |
| Coastal development              |                  |         |
| Tox Synthetic Treatmentplants    | 0.0              | (0.0)   |
| Habitatloss Dumping              | 0.0              | (0.0)   |
| Infrastructure                   | 0.0              | (0.0)   |
| Habitatloss Coastal Exploitation | 0.0              | (0.0)   |
| Total                            | 0.0              | (0.0)   |
| Recreational activities          |                  |         |
| Boating Pollution                | 0.0              | (0.0)   |
| Boating Noise                    | 0.0              | (0.0)   |
| Birdhunt                         | 1.05             | (1.05)  |
| Total                            | 1.05             | (1.05)  |
| Fisheries                        |                  |         |
| Abrasion Bottomtrawl             | 28.48            | (28.48) |
| Catch Gillnet                    | 0.35             | (0.35)  |
| Turbidity Bottom trawl           | 12.0             | (12.0)  |
| Catch Bottom trawl               | 13.22            | (13.22) |
| Catch Pelagic trawl              | 0.0              | (0.0)   |
| Total                            | 54.05            | (54.05) |
| Industry                         |                  |         |
| Tox Synthetic Industry           | 0.0              | (0.0)   |
| Tox Synthetic Harbor             | 0.0              | (0.0)   |
| Total                            | 0.0              | (0.0)   |
| Mineral mining                   |                  |         |
| Turbidity Mining                 | 0.0              | (0.0)   |
| Habitat Loss Mining              | 0.0              | (0.0)   |
| Total                            | 0.0              | (0.0)   |
| Defence                          |                  |         |
| Tox Metal Military               | 0.0              | (0.0)   |
| Explosion SPL                    | 0.0              | (0.0)   |
| Explosion PM                     | 0.0              | (0.0)   |
| Total                            | 0.0              | (0.0)   |
| Aquaculture                      |                  |         |
| Habitatloss Mussel farming       | 0.0              | (0.0)   |
| Total                            | 0.0              | (0.0)   |
| Energy                           |                  |         |
| Avoidance Windpower              | 0.0              | (0.0)   |
| Noise 125Hz Windpower            | 0.0              | (0.0)   |
| EMF                              | 0.0              | (0.0)   |
| Total                            | 0.0              | (0.0)   |

V344\_N

## Cumulative Effect

|           | S4         | (S3)         |
|-----------|------------|--------------|
| Total     | 71804412.1 | (71804412.1) |
| Mean      | 22148.2    | (22148.2)    |
| Std. Dev. | 7151.0     | (7151.0)     |
| Min       | 6961.7     | (6961.7)     |
| Max       | 34664.2    | (34664.2)    |
| Area km²  | 202.84     |              |

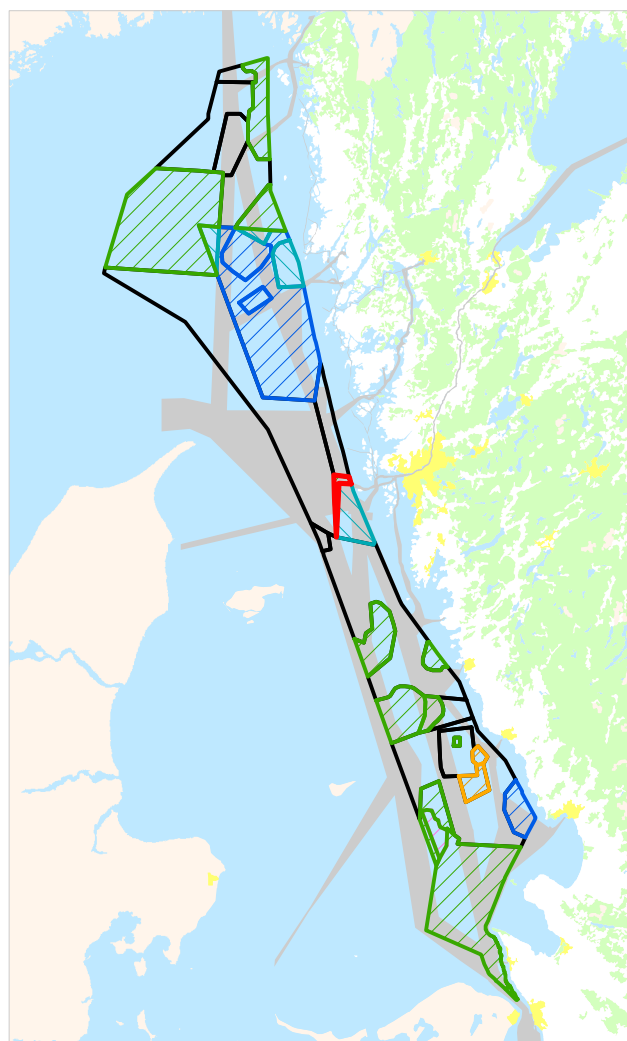
## Impacts Per Ecocomponent

| Name                    | % of Total<br>S4 | (S3)    |
|-------------------------|------------------|---------|
| Spawning Fish           | 18.75            | (18.75) |
| Softbottom Deep         | 18.04            | (18.04) |
| Cod                     | 12.94            | (12.94) |
| Porpoise Northsea       | 9.69             | (9.69)  |
| Harbour Seals           | 9.52             | (9.52)  |
| Plankton Community      | 8.59             | (8.59)  |
| Hardbottom Deep         | 6.45             | (6.45)  |
| Hardbottom Aphotic      | 4.56             | (4.56)  |
| Birds Coastal           | 3.14             | (3.14)  |
| Softbottom Aphotic      | 2.33             | (2.33)  |
| Transportbottom Aphotic | 2.05             | (2.05)  |
| Transportbottom Deep    | 1.55             | (1.55)  |
| Hardbottom Photic       | 1.49             | (1.49)  |
| Eel Migration           | 0.37             | (0.37)  |
| Transportbottom Photic  | 0.28             | (0.28)  |
| Herring                 | 0.12             | (0.12)  |
| Softbottom Photic       | 0.12             | (0.12)  |
| Mussel Reefs Total      | 0.0              | (0.0)   |
| Deep Reef               | 0.0              | (0.0)   |
| Artificial Reefs Total  | 0.0              | (0.0)   |
| Rivermouth Fish         | 0.0              | (0.0)   |
| Seabird Winter Coastal  | 0.0              | (0.0)   |
| Porpoise Beltsea        | 0.0              | (0.0)   |
| Sprat                   | 0.0              | (0.0)   |
| Angiosperms             | 0.0              | (0.0)   |
| Shoreline Complexity    | 0.0              | (0.0)   |
| Haploops Reef           | 0.0              | (0.0)   |
| Grey Seals              | 0.0              | (0.0)   |
| Seabird Winter Offshore | 0.0              | (0.0)   |

Calculated with SyM

Date: 2018-03-22

Medins Havs och Vattenkonsulter AB



V345\_N

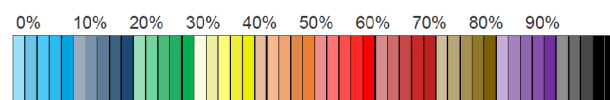
Miljöpåverkan i området jämfört med medelvärde för:

|                             |      |
|-----------------------------|------|
| S4 Västerhavet              | 124% |
| S4 Skagerrak                | 113% |
| S3 framtidsscenario år 2030 | 100% |

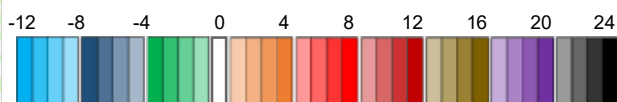
Områden och huvudanvändning



Procentuell andel av den högsta miljöpåverkan i Västerhavet, inklusive kustområden (S4)



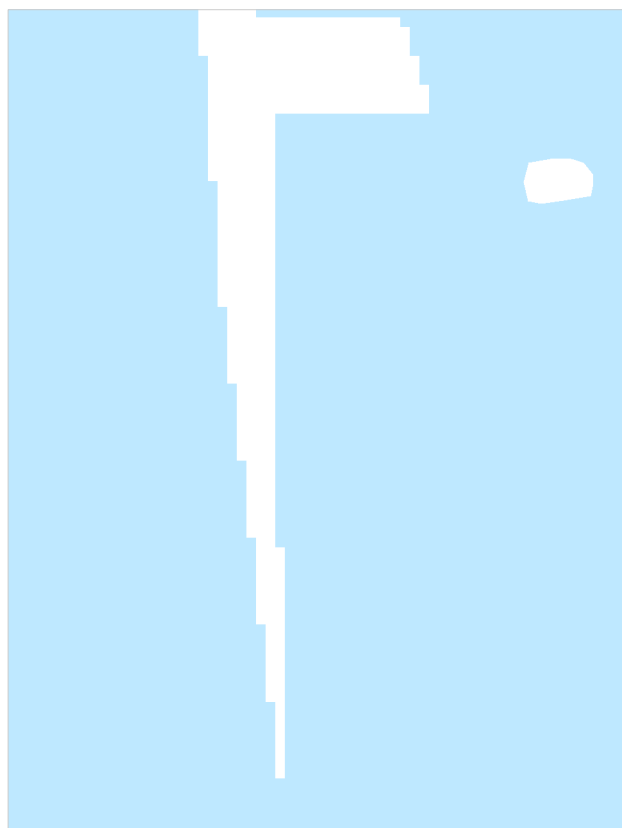
S4 plan 2030 - S3 Nollalternativ 2030.  
S4, S3 uttryckt som procentuell andel av den högsta miljöpåverkan i Västerhavet, inklusive kustområden.



S4 plan 2030



S4 plan 2030 - Nollalternativ 2030.



## Impacts Per Pressure

| Name                             | % of Total<br>S4 | (S3)    |
|----------------------------------|------------------|---------|
| Eutrophication                   |                  |         |
| Phosphorous Background           | 2.28             | (2.28)  |
| Anoxia Background                | 3.0              | (3.0)   |
| Nitrogen Background              | 18.6             | (18.6)  |
| Total                            | 23.87            | (23.87) |
| General pollution                |                  |         |
| Tox Metal Background             | 0.01             | (0.01)  |
| Oilspill 2knots Wreck            | 0.0              | (0.0)   |
| Tox Synthetic Background         | 9.01             | (9.01)  |
| Tox Munition                     | 0.0              | (0.0)   |
| Tox Mine Risk                    | 0.13             | (0.13)  |
| Total                            | 9.15             | (9.15)  |
| Shipping                         |                  |         |
| Turbidity Shipping               | 0.0              | (0.0)   |
| Noise 2000Hz Shipping            | 0.28             | (0.28)  |
| Oilspill 2knots Shipping         | 3.6              | (3.6)   |
| Noise 125Hz Shipping             | 25.4             | (25.4)  |
| Total                            | 29.28            | (29.28) |
| Coastal development              |                  |         |
| Tox Synthetic Treatmentplants    | 0.0              | (0.0)   |
| Habitatloss Dumping              | 0.0              | (0.0)   |
| Infrastructure                   | 0.0              | (0.0)   |
| Habitatloss Coastal Exploitation | 0.0              | (0.0)   |
| Total                            | 0.0              | (0.0)   |
| Recreational activities          |                  |         |
| Boating Pollution                | 0.0              | (0.0)   |
| Boating Noise                    | 0.0              | (0.0)   |
| Birdhunt                         | 0.0              | (0.0)   |
| Total                            | 0.0              | (0.0)   |
| Fisheries                        |                  |         |
| Abrasion Bottomtrawl             | 15.79            | (15.79) |
| Catch Gillnet                    | 0.52             | (0.52)  |
| Turbidity Bottom trawl           | 8.0              | (8.0)   |
| Catch Bottom trawl               | 8.68             | (8.68)  |
| Catch Pelagic trawl              | 0.41             | (0.41)  |
| Total                            | 33.42            | (33.42) |
| Industry                         |                  |         |
| Tox Synthetic Industry           | 0.0              | (0.0)   |
| Tox Synthetic Harbor             | 0.0              | (0.0)   |
| Total                            | 0.0              | (0.0)   |
| Mineral mining                   |                  |         |
| Turbidity Mining                 | 0.0              | (0.0)   |
| Habitat Loss Mining              | 0.0              | (0.0)   |
| Total                            | 0.0              | (0.0)   |
| Defence                          |                  |         |
| Tox Metal Military               | 0.0              | (0.0)   |
| Explosion SPL                    | 4.27             | (4.27)  |
| Explosion PM                     | 0.0              | (0.0)   |
| Total                            | 4.27             | (4.27)  |
| Aquaculture                      |                  |         |
| Habitatloss Mussel farming       | 0.0              | (0.0)   |
| Total                            | 0.0              | (0.0)   |
| Energy                           |                  |         |
| Avoidance Windpower              | 0.0              | (0.0)   |
| Noise 125Hz Windpower            | 0.0              | (0.0)   |
| EMF                              | 0.0              | (0.0)   |
| Total                            | 0.0              | (0.0)   |

V345\_N

## Cumulative Effect

|           | S4         | (S3)         |
|-----------|------------|--------------|
| Total     | 14888262.7 | (14888262.7) |
| Mean      | 29717.1    | (29717.1)    |
| Std. Dev. | 5748.8     | (5748.8)     |
| Min       | 19262.4    | (19262.4)    |
| Max       | 41777.4    | (41777.4)    |
| Area km²  | 31.02      |              |

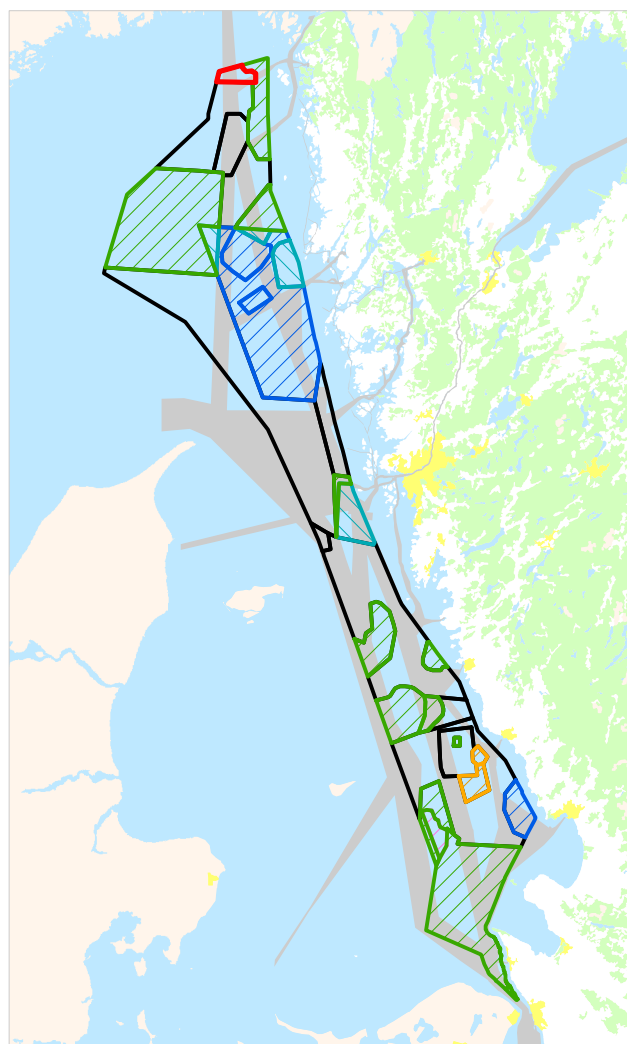
## Impacts Per Ecocomponent

| Name                    | % of Total<br>S4 | (S3)    |
|-------------------------|------------------|---------|
| Softbottom Deep         | 16.96            | (16.96) |
| Cod                     | 14.01            | (14.01) |
| Porpoise Northsea       | 13.48            | (13.48) |
| Herring                 | 12.49            | (12.49) |
| Sprat                   | 10.24            | (10.24) |
| Softbottom Aphotic      | 9.42             | (9.42)  |
| Harbour Seals           | 7.06             | (7.06)  |
| Plankton Community      | 6.92             | (6.92)  |
| Spawning Fish           | 6.63             | (6.63)  |
| Eel Migration           | 1.07             | (1.07)  |
| Transportbottom Aphotic | 0.5              | (0.5)   |
| Hardbottom Aphotic      | 0.45             | (0.45)  |
| Hardbottom Deep         | 0.43             | (0.43)  |
| Transportbottom Deep    | 0.31             | (0.31)  |
| Artificial Reefs Total  | 0.03             | (0.03)  |
| Birds Coastal           | 0.01             | (0.01)  |
| Angiosperms             | 0.0              | (0.0)   |
| Rivermouth Fish         | 0.0              | (0.0)   |
| Seabird Winter Coastal  | 0.0              | (0.0)   |
| Porpoise Beltsea        | 0.0              | (0.0)   |
| Shoreline Complexity    | 0.0              | (0.0)   |
| Softbottom Photic       | 0.0              | (0.0)   |
| Transportbottom Photic  | 0.0              | (0.0)   |
| Hardbottom Photic       | 0.0              | (0.0)   |
| Haploops Reef           | 0.0              | (0.0)   |
| Deep Reef               | 0.0              | (0.0)   |
| Mussel Reefs Total      | 0.0              | (0.0)   |
| Grey Seals              | 0.0              | (0.0)   |
| Seabird Winter Offshore | 0.0              | (0.0)   |

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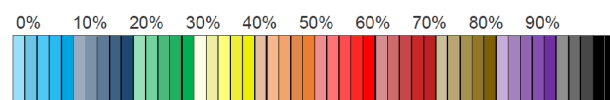
Miljöpåverkan i området jämfört med medelvärde för:

|                             |     |
|-----------------------------|-----|
| S4 Västerhavet              | 86% |
| S4 Skagerrak                | 79% |
| S3 framtidsscenario år 2030 | 96% |

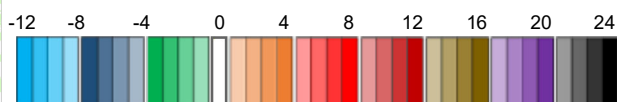
Områden och huvudanvändning



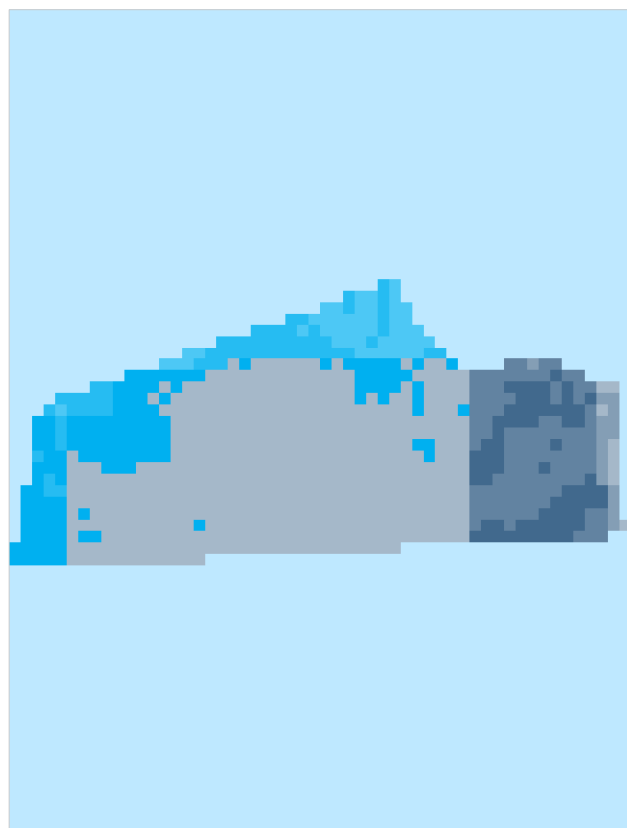
Procentuell andel av den högsta miljöpåverkan i Västerhavet, inklusive kustområden (S4)



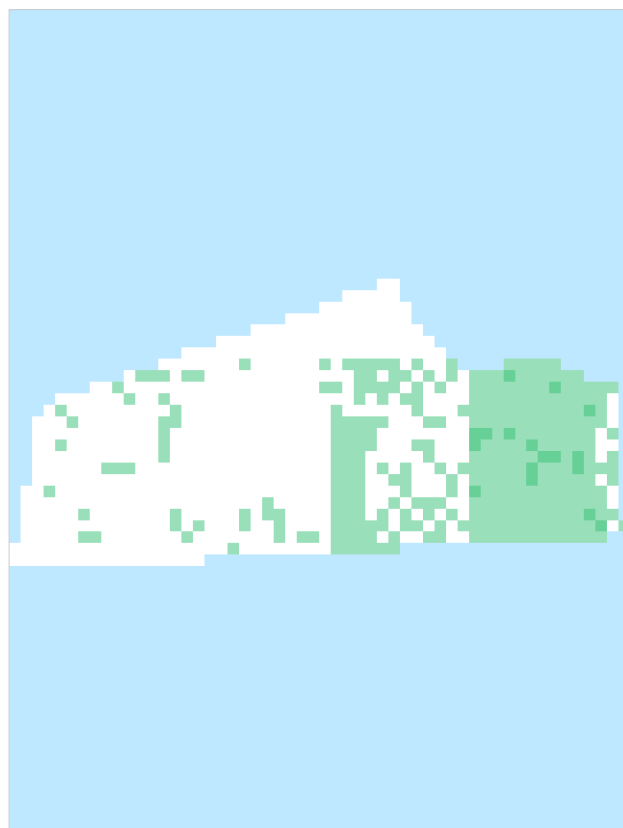
S4 plan 2030 - S3 Nollalternativ 2030.  
S4, S3 uttryckt som procentuell andel av den högsta miljöpåverkan i Västerhavet, inklusive kustområden.



S4 plan 2030



S4 plan 2030 - Nollalternativ 2030.



## Impacts Per Pressure

| Name                             | % of Total<br>S4 | (S3)    |
|----------------------------------|------------------|---------|
| Eutrophication                   |                  |         |
| Phosphorous Background           | 2.17             | (2.08)  |
| Anoxia Background                | 0.82             | (0.78)  |
| Nitrogen Background              | 23.6             | (22.61) |
| Total                            | 26.58            | (25.46) |
| General pollution                |                  |         |
| Tox Metal Background             | 2.59             | (2.48)  |
| Oilspill 2knots Wreck            | 0.0              | (0.0)   |
| Tox Synthetic Background         | 15.63            | (14.97) |
| Tox Munition                     | 0.0              | (0.0)   |
| Tox Mine Risk                    | 0.0              | (0.0)   |
| Total                            | 18.22            | (17.45) |
| Shipping                         |                  |         |
| Turbidity Shipping               | 0.0              | (0.0)   |
| Noise 2000Hz Shipping            | 0.0              | (0.0)   |
| Oilspill 2knots Shipping         | 1.51             | (1.44)  |
| Noise 125Hz Shipping             | 13.02            | (12.47) |
| Total                            | 14.52            | (13.91) |
| Coastal development              |                  |         |
| Tox Synthetic Treatmentplants    | 0.0              | (0.0)   |
| Habitatloss Dumping              | 0.0              | (0.0)   |
| Infrastructure                   | 0.0              | (0.0)   |
| Habitatloss Coastal Exploitation | 0.0              | (0.0)   |
| Total                            | 0.0              | (0.0)   |
| Recreational activities          |                  |         |
| Boating Pollution                | 0.0              | (0.0)   |
| Boating Noise                    | 0.0              | (0.0)   |
| Birdhunt                         | 0.0              | (0.0)   |
| Total                            | 0.0              | (0.0)   |
| Fisheries                        |                  |         |
| Abrasion Bottomtrawl             | 25.32            | (24.25) |
| Catch Gillnet                    | 0.05             | (0.06)  |
| Turbidity Bottom trawl           | 9.47             | (9.07)  |
| Catch Bottom trawl               | 5.84             | (9.79)  |
| Catch Pelagic trawl              | 0.0              | (0.0)   |
| Total                            | 40.68            | (43.17) |
| Industry                         |                  |         |
| Tox Synthetic Industry           | 0.0              | (0.0)   |
| Tox Synthetic Harbor             | 0.0              | (0.0)   |
| Total                            | 0.0              | (0.0)   |
| Mineral mining                   |                  |         |
| Turbidity Mining                 | 0.0              | (0.0)   |
| Habitat Loss Mining              | 0.0              | (0.0)   |
| Total                            | 0.0              | (0.0)   |
| Defence                          |                  |         |
| Tox Metal Military               | 0.0              | (0.0)   |
| Explosion SPL                    | 0.0              | (0.0)   |
| Explosion PM                     | 0.0              | (0.0)   |
| Total                            | 0.0              | (0.0)   |
| Aquaculture                      |                  |         |
| Habitatloss Mussel farming       | 0.0              | (0.0)   |
| Total                            | 0.0              | (0.0)   |
| Energy                           |                  |         |
| Avoidance Windpower              | 0.0              | (0.0)   |
| Noise 125Hz Windpower            | 0.0              | (0.0)   |
| EMF                              | 0.0              | (0.0)   |
| Total                            | 0.0              | (0.0)   |

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## Cumulative Effect

|           | S4         | (S3)         |
|-----------|------------|--------------|
| Total     | 18944046.6 | (19776683.3) |
| Mean      | 20681.3    | (21590.3)    |
| Std. Dev. | 5380.1     | (6019.8)     |
| Min       | 8487.5     | (8520.8)     |
| Max       | 31217.9    | (33532.3)    |
| Area km²  | 57.49      |              |

## Impacts Per Ecocomponent

| Name                    | % of Total<br>S4 | (S3)    |
|-------------------------|------------------|---------|
| Softbottom Deep         | 31.64            | (31.7)  |
| Spawning Fish           | 19.19            | (20.11) |
| Cod                     | 13.84            | (13.25) |
| Plankton Community      | 10.98            | (10.52) |
| Harbour Seals           | 9.3              | (8.91)  |
| Porpoise Northsea       | 8.16             | (8.49)  |
| Hardbottom Aphotic      | 3.87             | (3.92)  |
| Transportbottom Deep    | 2.1              | (2.15)  |
| Hardbottom Deep         | 0.36             | (0.37)  |
| Softbottom Aphotic      | 0.18             | (0.18)  |
| Eel Migration           | 0.15             | (0.14)  |
| Herring                 | 0.13             | (0.14)  |
| Transportbottom Aphotic | 0.1              | (0.11)  |
| Rivermouth Fish         | 0.0              | (0.0)   |
| Angiosperms             | 0.0              | (0.0)   |
| Birds Coastal           | 0.0              | (0.0)   |
| Seabird Winter Coastal  | 0.0              | (0.0)   |
| Sprat                   | 0.0              | (0.0)   |
| Porpoise Beltsea        | 0.0              | (0.0)   |
| Shoreline Complexity    | 0.0              | (0.0)   |
| Softbottom Photic       | 0.0              | (0.0)   |
| Transportbottom Photic  | 0.0              | (0.0)   |
| Hardbottom Photic       | 0.0              | (0.0)   |
| Artificial Reefs Total  | 0.0              | (0.0)   |
| Haploops Reef           | 0.0              | (0.0)   |
| Deep Reef               | 0.0              | (0.0)   |
| Mussel Reefs Total      | 0.0              | (0.0)   |
| Grey Seals              | 0.0              | (0.0)   |
| Seabird Winter Offshore | 0.0              | (0.0)   |

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