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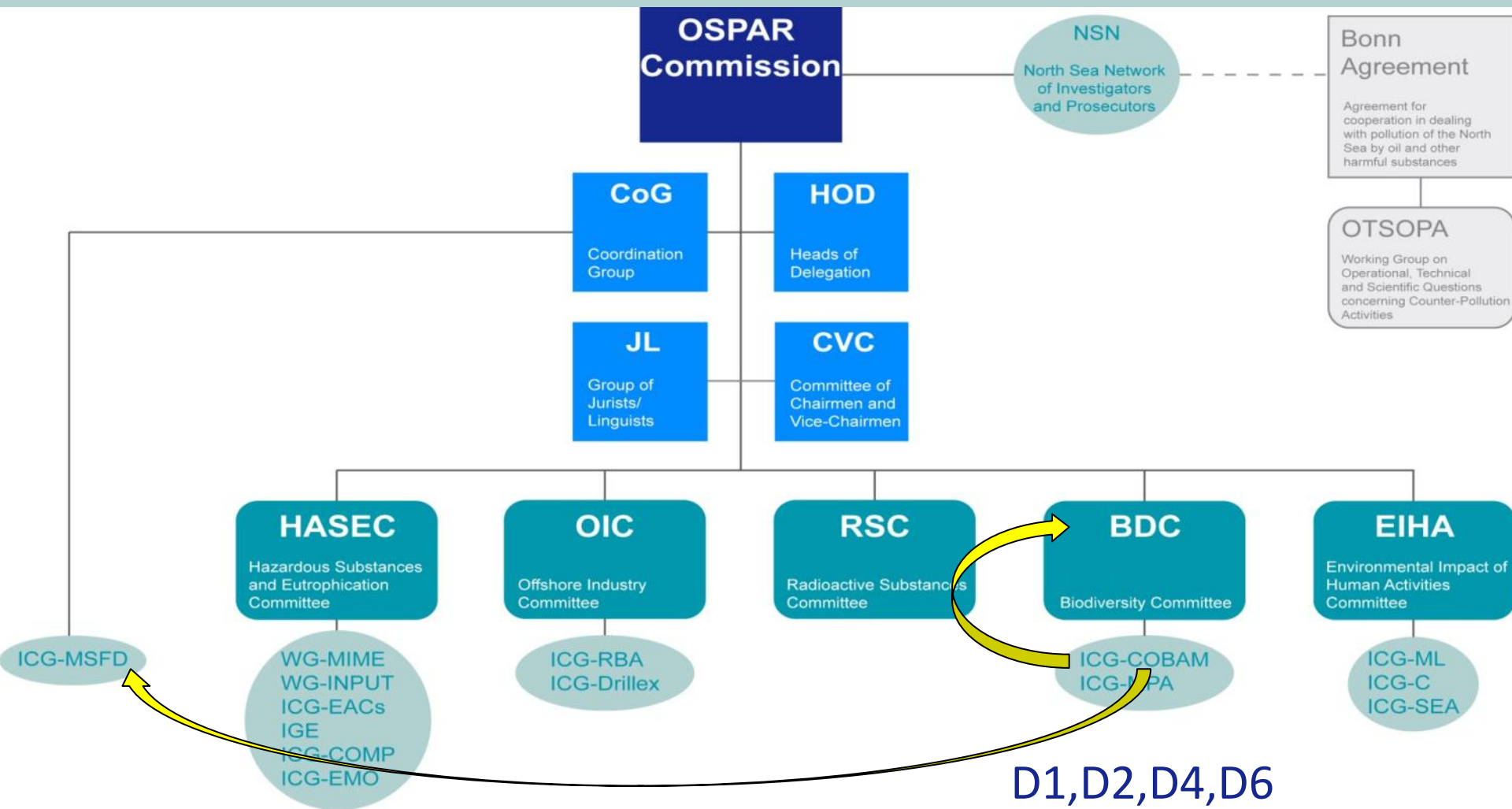
*Protecting and conserving  
the North-East Atlantic  
and its resources*

## **Bilan et perspectives des travaux OSPAR ICG-COBAM: Vers un jeux commun d'indicateurs de biodiversité...**



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ICG-COBAM

OSPAR BDC, 12 February 2013, Hell



- OSPAR Commission and advisory groups
- Main Committees
- OSPAR expert groups (report to subsidiary bodies of the OSPAR Commission and work intersessionally)

**D1, D2, D4, D6**

FR: L. Guérin D1/D2: I. Gailhard (MNHN/CNRS)  
 D4: I. Rombouts (N. Niquil) (CNRS)  
 D6: H. Müller (BRGM)  
 coord.: A. Thomassin (MEDDE)

# Bilan des travaux COBAM en février 2013

- Travail par correspondance (site collaboratif Basecamp, courriels, téléphone) et réunions (~1/ 4 mois) + ateliers
- Groupes d'experts pour Mammifères, Oiseaux, Poissons, fonds marins, colonne d'eau, réseaux trophiques, espèces introduites (> 150 experts, dont 3+15 français, représentés dans chaque groupe, + ou - actifs)
- Atelier d'Utrecht 11/2010: Methodologies pour la définition du BEE
- Atelier d'Amsterdam 11/2011: Indicateurs OSPAR/DHFF/DCE/DCSMM
- **Document guide BEE** (*Advice Manual*, **Version mars 2012**)
- Atelier de Hambourg 07/2012: Indicateurs habitats benthiques (fonds marins)
- Atelier de Londres 11/2012: Indicateurs habitats pélagiques (colonne d'eau)
- **Rapport 'Vers un jeu commun d'indicateurs de biodiversité'** (44 pp.+annexes) **Version février 2013**, adoptée à BDC (Hell, Norvège) le 14/02/2013.
  - Besoin de développements méthodologiques à court et moyen-long terme

# Le jeu commun d'indicateurs de biodiversité OSPAR

## 1) Mammifères



Code	Previous code*	Indicator	Category
M-1	31&33	Distributional range and pattern of seal haul-outs and breeding colonies	Core
M-2	32&34	Distributional range and pattern of cetaceans species regularly present	Core
M-3	35	Abundance of grey and harbour seal at haul-out sites & within breeding colonies	Core
M-4	36	Abundance at the relevant temporal scale of cetacean species regularly present	Core
M-5	37	Harbour seal and Grey seal pup production	Core
M-6	38&39	Numbers of individuals within species being bycaught in relation to population	Core

## 2) Oiseaux



Code	Previous code*	Indicator	Category
B-1	25	Species-specific trends in relative abundance of marine bird species	Core
B-2	26	Annual breeding success of kittiwake	Core
B-3	27	Breeding success/failure of marine birds	Core
B-4	29	Non-native/invasive mammal presence on island seabird colonies	Core
B-5	28	Mortality of marine birds from fishing (bycatch) and aquaculture	Candidate
B-6	24	Distributional pattern of breeding and non-breeding marine birds	Core

## 3) Poissons



Code	Previous code*	Indicator	Category
FC-1	17	Population abundance/biomass of a suite of selected species	Core
FC-2	20	OSPAR EcoQO for proportion of large fish (LFI)	Core
FC-3	22	Mean maximum length of demersal fish and elasmobranchs	Core
FC-4	18	By-catch rates of Chondrichthyes	Candidate
FC-5	21	Conservation status of elasmobranch and demersal bony-fish species (IUCN)	Candidate
FC-6	19	Proportion of mature fish in the populations of all species sampled adequately	Candidate
FC-7	15	Distributional range of a suite of selected species	Candidate
FC-8	16	Distributional pattern within range of a suite of selected species	Candidate

# Le jeux commun d'indicateurs de biodiversité OSPAR

## 4) Habitats benthiques



Code	Previous code*	Indicator	Category
BH-1	4	Typical species composition	Core
BH-2	7	Multi-metric indices	Core
BH-3	11a/11b	Physical damage of predominant and special habitats	Candidate
BH-4	11b	Area of habitat loss	Candidate
BH-5	12	Size-frequency distribution of bivalve or other sensitive/indicator species	Candidate

## 5) Habitats pélagiques



Code	Previous code*	Indicator	Category
PH-1	NA	Changes of plankton functional types (life form) index Ratio	Core
PH-2	NA	Plankton biomass and/or abundance	Core
PH-3	NA	Changes in biodiversity index (s)	Core

## 6) Réseaux trophiques



Number	Previous code*	Indicator	Category
FW-1	NA	Reproductive success of marine birds in relation to food availability	Core
FW-2	NA	Production of phytoplankton	Core
FW-3	NA	Size composition in fish communities (LFI)	Core
FW-4	NA	Changes in average trophic level of marine predators (cf MTI)	Core
FW-5	NA	Change of plankton functional types (life form) index	Core
FW-6	NA	Biomass, species composition and spatial distribution of zooplankton	Candidate
FW-7	NA	Fish biomass and abundance of dietary functional groups	Candidate
FW-8	NA	Changes in average faunal biomass per trophic level	Candidate
FW-9	NA	Ecological Network Analysis indicator	Candidate

## 7) sp. non-indigènes



Number	Previous code*	Indicator	Category
NIS-1	41	Pathways management measures	Candidate
NIS-2	40	Rate of new introductions of NIS (per defined period)	Candidate

## En résumé:

- Jeux commun pas encore finalisé
- Différentes étapes de développement nécessaires
- Les indicateurs actuels pourront déjà guider le rapportage 2014 à U.E. (coopération régionale)
- Décision sur le jeux commun à OSPAR juin 2013
- Lacunes à combler et jeux commun à considérer comme un **ensemble** (en lien avec les autres descripteurs), à développer et réviser régulièrement au fur et à mesure de l'avancée des connaissances

# Réflexions sur la surveillance commune

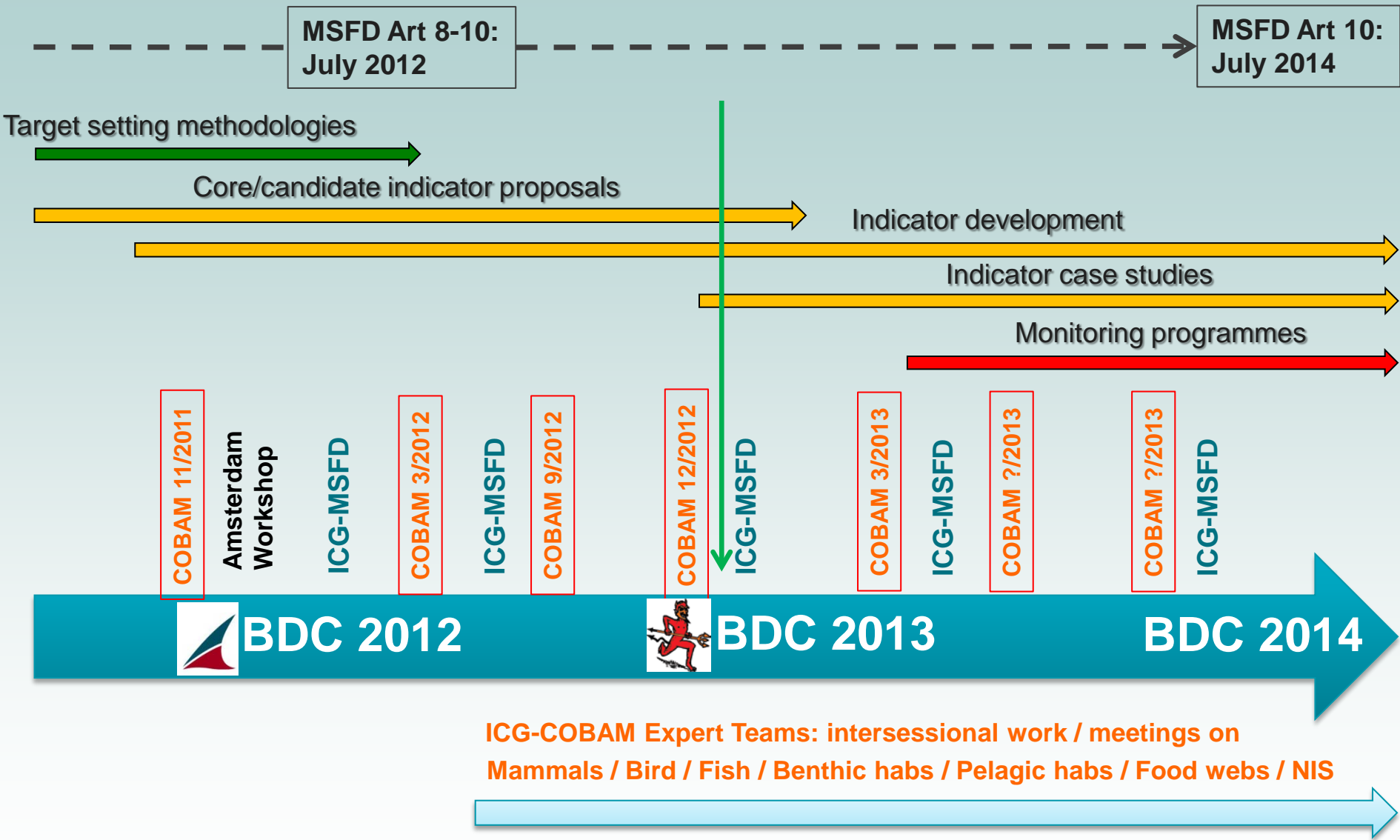
- Après OSPAR 2013: focus sur la coordination de la surveillance commune
- Développement d'un réseau de surveillance OSPAR
  - Sur la base d'un jeu commun d'indicateurs
  - Initiation de processus sous-regionaux
  - Methodologies communes de surveillance pour des évaluations cohérentes et comparables
  - Mise en oeuvre d'une surveillance régionale (zone OSPAR)
- Approche itérative, en plusieurs phases, basée sur l'existant

# Merci de votre attention





# Le processus OSPAR / ICG-COBAM



# Réponses et sensibilités aux pressions anthropiques

Code	Phys. loss	Phys. damage	Hydr. change	Contam.	Nutrient	Noise and litter	Non-indig species	Select. extract.	Climate change
M-1						low			medium
M-2						high			medium
M-3				medium		low			low
M-4						low			low
M-5				high	low	low			low
M-6								high	
B-1				low		low	medium	medium	medium
B-2				low				high	high
B-3 (also FW-1)				low			high	high	high
B-4							high		
B-5								high	
B-6	medium			low			medium	medium	high
FC-1						low		high	low
FC-2 (also FW-3)								high	
FC-3						low		high	low
FC-4								high	
FC-5				low		low		high	low
FC-6								high	
FC-7	medium	low	medium			medium		medium	medium
FC-8	medium		medium	low		medium		medium	medium
BH-1		high	high	medium	high	low	high	high	
BH-2		high	high	high	high	low	medium	low	medium
BH-3		high	medium	medium	medium	low	medium	medium	medium
BH-4	high	high	medium	medium	medium		high	high	medium
BH-5		high	low	low	low	low	medium	medium	medium
PH-1			medium	medium	high		medium	high	high
PH-2			medium	medium	high		medium	high	high
PH-3	low		medium	medium	high		low	high	medium
FW-2			medium	medium	high		medium	low	medium
FW-4	low		medium	medium	low		low	high	medium
FW-5			medium	medium	high		low	high	high
FW-6			high	medium	medium		medium	medium	high
FW-7			low	low	medium		low	high	high
FW-8	low		medium	medium	low		low	high	medium
FW-9									
NIS-1			low				high		low
NIS-2			low				high		low



# Premiers résultats d'une enquête auprès des CP

- Exercice pour confronter le jeu d'indicateurs communs OSPAR concertés entre experts/gestionnaires avec les besoins/rapportages nationaux.
  - 'Mini'-Inventory (12/2012) = réponse informelle globale, au niveau technique et administratif
  - 'Maxi'-inventory en cours, sur la base du rapportage Art. 9 et 10
- Q1: Which of the possible common indicators have been reported to the EC/are in use?
- Q2: Would you regard this indicator useful as part of a region-wide common set for future assessments?
- Q3: Is current monitoring capable of supporting the indicator?

	Indicators	Q1	Q2	Q3
		N=9	N=8	N=7
	<b>Marine mammals</b>			
M-1	Distributional range and pattern of grey and harbour seal haul-outs and colonies	7	7	5
M-2	Distributional range and pattern of cetaceans species regularly present	8	8	5
M-3	Abundance of grey and harbour seal at haul-out sites & within breeding colonies	7	7	5
M-4	Abundance at the relevant temporal scale of cetacean species regularly present	8	8	6
M-5	Harbour seal and Grey seal pup production	7	7	4
M-6	Numbers of individuals within species being bycaught in relation to population	7	7	5
	<b>Birds</b>			
B-1	Species-specific trends in relative abundance of non-breeding and breeding marine bird species	8	8	7
B-2	Annual breeding success of kittiwake	5	5	2
B-3	Breeding success/failure of marine birds	8	8	5
B-4	Non-native/invasive mammal presence on island seabird colonies	5	5	1
B-5	Mortality of marine birds from fishing (bycatch) and aquaculture	8	8	2
B-6	Distributional pattern of breeding and non-breeding marine birds	7	7	5
	<b>Fish</b>			
FC-1	Population abundance/ biomass of a suite of selected species	7	7	6
FC-2	OSPAR EcoQO for proportion of large fish (LFI)	7	7	6
FC-3	Mean maximum length of demersal fish and elasmobranchs	7	7	6
FC-4	By-catch rates of Chondrichthyes	7	7	6
FC-5	Conservation status of elasmobranch and demersal bony-fish species (IUCN)	5	5	5
FC-6	Proportion of mature fish in the populations of all species sampled adequately in international and national fish surveys	8	8	5
FC-7	Distributional range of a suite of selected species	8	8	6
FC-8	Distributional pattern within range of a suite of selected species	7	7	6

	Indicators	Q1	Q2	Q3
		N=9	N=8	N=7
	<b>Benthic Habitats</b>			
BH-1	Typical species composition	8	8	6
BH-2	Multi-metric indices	8	8	7
BH-3	Physical damage of predominant and special habitats	8	8	6
BH-4	Area of habitat loss	8	8	6
BH-5	Size-frequency distribution of bivalve or other sensitive/indicator species	7	7	5
	<b>Pelagic Habitats</b>			
PH-1	Change of plankton functional types (life form) index Ratio	5	5	6
PH-2	Plankton biomass and/or abundance	7	7	7
PH-3	Changes in biodiversity index(s)	4	4	6
	<b>Food webs</b>			
FW-1	Reproductive success of marine birds in relation to food availability	8	8	4
FW-2	Production of phytoplankton	7	7	6
FW-3	Size distribution in fish communities (LFI)	8	8	8
FW-4	Changes in average trophic level of marine predators (cf. MTI)	8	8	4
FW-5	Change of plankton functional types (life form) index Ratio	5	5	4
FW-6	Biomass, species composition and spatial distribution of zooplankton	6	6	6
FW-7	Fish biomass and abundance of dietary functional groups	7	7	7
FW-8	Changes in average faunal biomass per trophic level (Biomass Trophic Spectrum)	5	5	2
FW-9	Ecological Network Analysis Indicator (e.g. trophic efficiency, flow diversity)	3	3	1
	<b>NIS</b>			
NIS-1	Pathways management measures	8	8	2
NIS-2	Rate of new introductions of NIS (per defined period)	8	8	5