Роль международных организаций в управлении морскими живыми ресурсами

Концепция «Управление морскими живыми ресурсами»

В. И. Мейснер

«добыча наиболее допустимого количества рыбы, в наиболее ценном и выгодном для дальнейшего использования виде, с наименьшей затратой сил и материальных средств, с обязательным сохранением природного запаса и обеспечения непрерывности использования водоема».

Ф. И. Баранов

«Основой и конечной целью рыболовства является достижение возможности контролировать состав рыбного населения водоема, видоизменять его сообразно нашим потребностям и брать из него нужное количество рыбы».

Концепция «Управление морскими живыми ресурсами»

А. Н. Вылегжанин и В. К. Зиланов

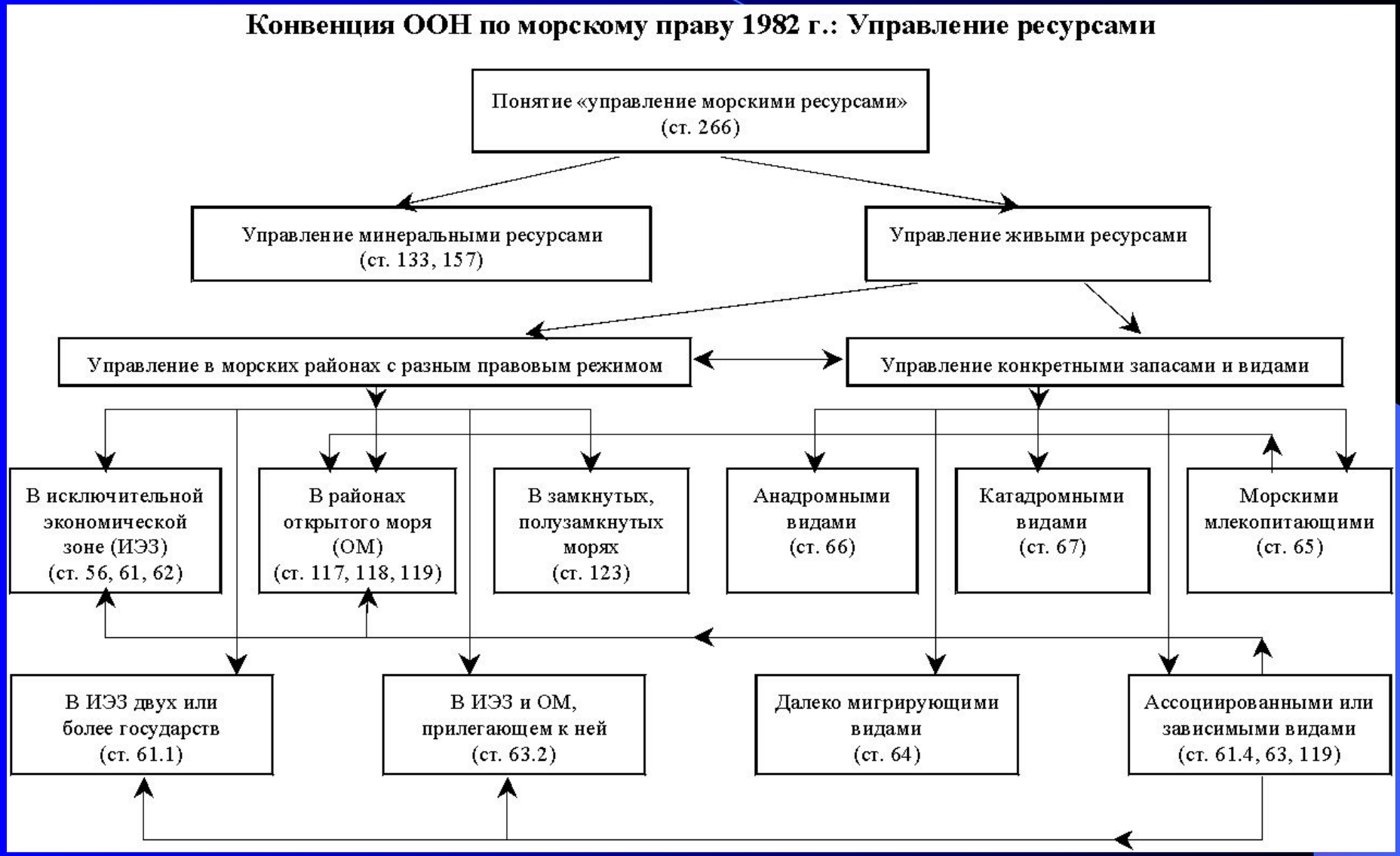
«управление морскими живыми ресурсами прежде всего как деятельность государств, направленную на предотвращение разрушения рыбных запасов и обеспечение их оптимального использования».

«меры по сохранению и управлению, будь то на местном, национальном, субрегиональном или региональном уровне, должны быть основаны на имеющихся наиболее точных научных данных и предназначены для обеспечения долговременной устойчивости промысловых ресурсов на таком уровне, который способствует их оптимальному использованию и позволяет сохранить их для нынешнего и будущих поколений; соображения сиюминутного характера не должны ставить под угрозу реализацию этих задач».

Концепция «Управление морскими живыми ресурсами»

«биологическое единство запасов, которые обитают в течение своего жизненного цикла в районах под национальной юрисдикцией и в районах открытого моря, требует совместимости мер по сохранению и управлению такими запасами в целях устойчивого развития рыболовства».

Конвенция ООН по морскому праву 1982 г.



Конвенция ООН по морскому праву 1982 г.

Экологический компонент.

Оценка состояния запасов морских организмов и их мониторинг.

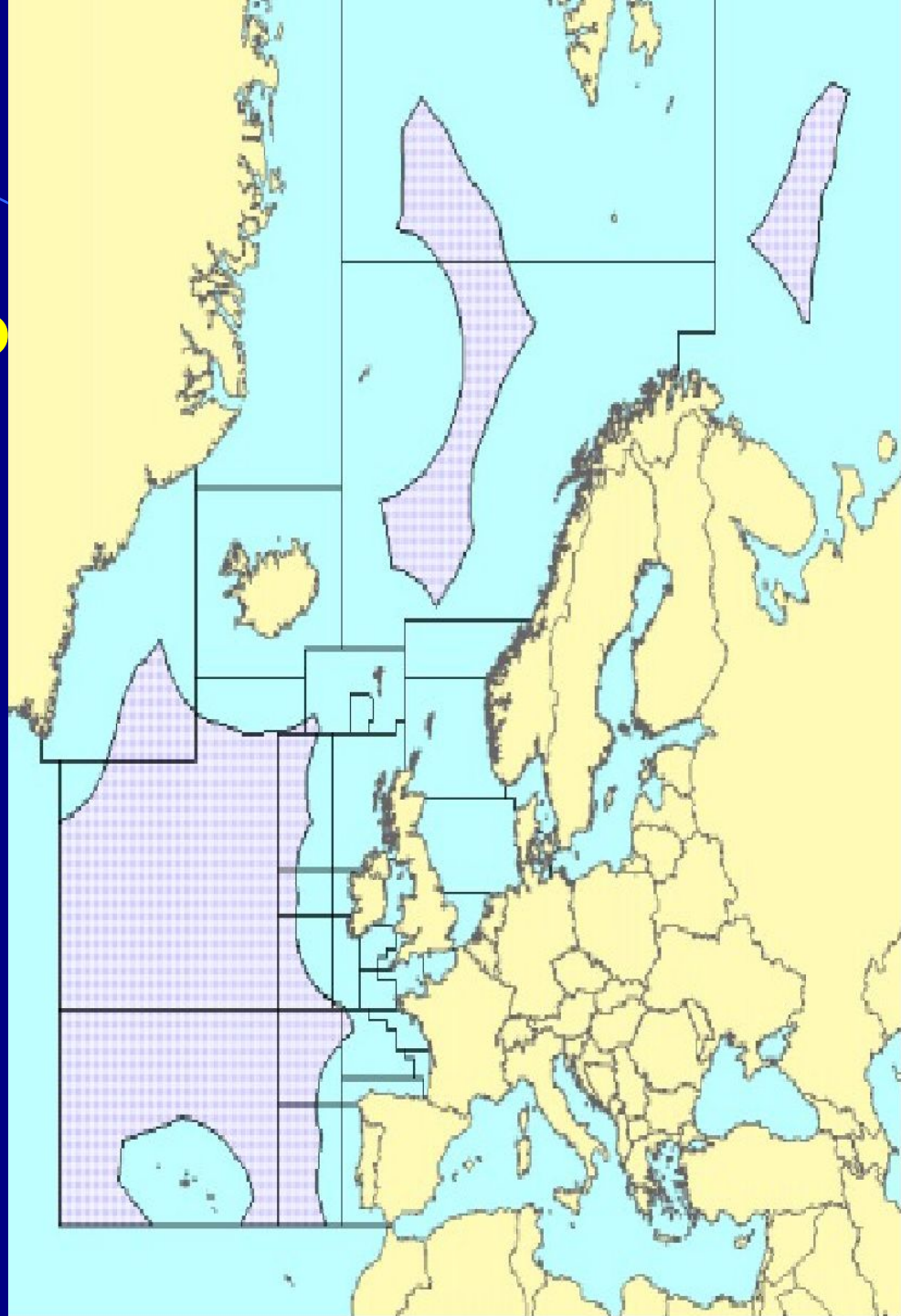
Определение максимального устойчивого вылова.

Экономический компонент.

Регулирование рыболовства.

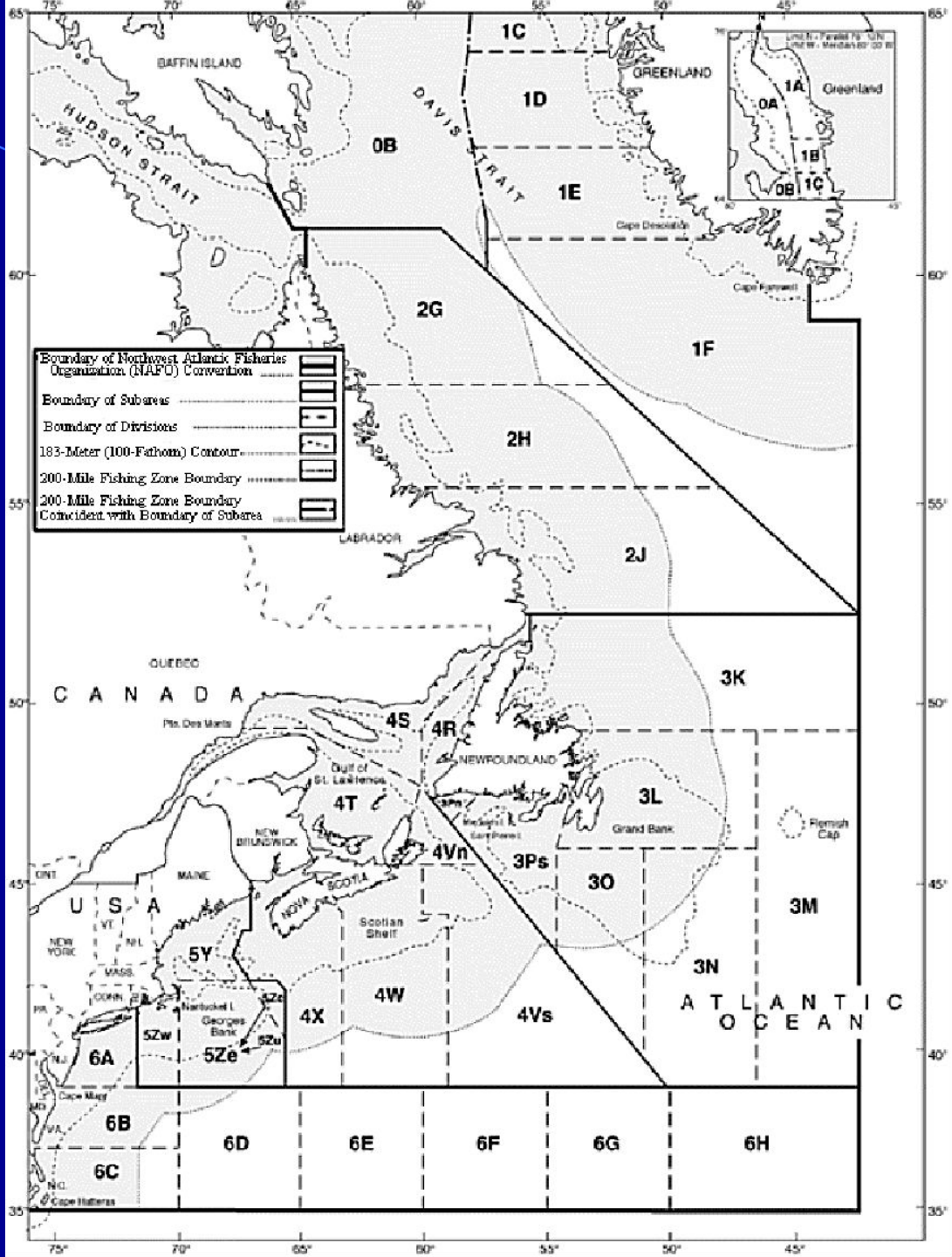
Институциональный компонент.

Конвенция о рыболовстве в северо-восточной части Атлантического океана (НЕАФК)



Конвенция о будущем многостороннем сотрудничестве в области рыболовства в северо-западной части Атлантического океана (НАФО)

Генеральный совет
Научный совет
Рыболовная комиссия
Секретариат



Конвенция о сохранении лосося в северной части Атлантического океана (НАСКО)

International Council for the Exploration of the Sea (ICES)

Международный Совет по исследованию моря (ИКЕС)

Учрежден в 1902 г. после конференций 1899 г. и 1901 г.
Устав ИКЕС определен в Конвенции ИКЕС от 1964 г.

Конвенция о Международном Совете по исследованию моря (ИКЕС)

Статья 1.

a. содействовать и способствовать проведению исследований и изысканий по изучению моря, особенно тех, которые касаются его живых ресурсов;

b. разрабатывать программы, которые требуются для этой цели, и организовывать с согласия Договаривающихся Сторон такие исследования и изыскания, которые могут оказаться необходимыми;

c. опубликовывать или иным образом распространять результаты исследований и изысканий, проведенных под его эгидой, или поощрять опубликование таковых.

Кто участвует в ИКЕС?

Члены ИКЕС (19)			Наблюдатели (5)
Бельгия	Франция	Нидерланды	Испания
Канада	Германия	Норвегия	Швеция
Дания	Исландия	Португалия	Великобритания
Эстония	Ирландия	Словения	США
Финляндия	Латвия	Россия	Всемирный Фонд Природы

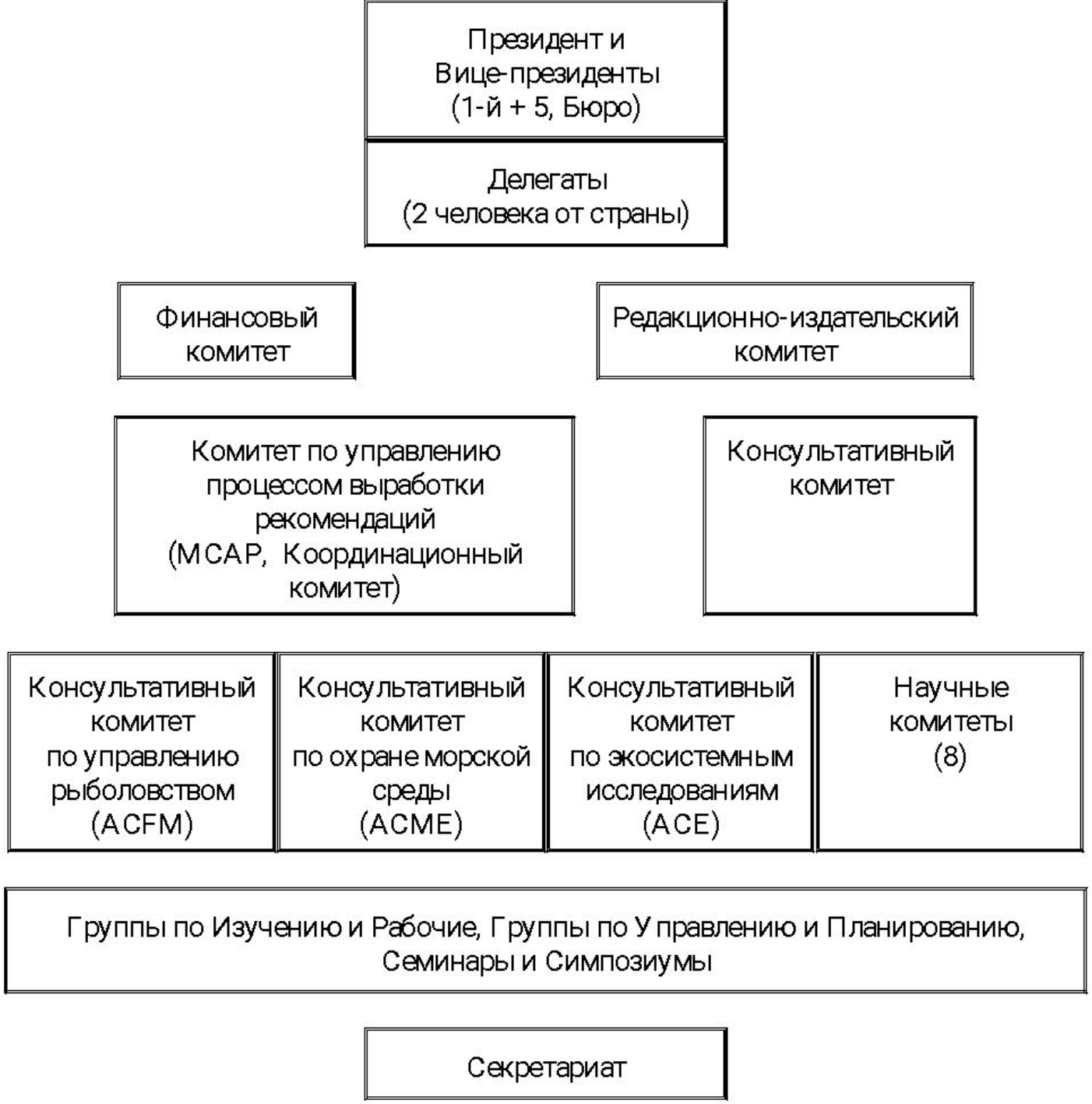
Австралия

Южная Африка

Греция

Италия

Структура ИКЕС



научные комитеты ИКЕС

Консультативный (CONC, A)	Технологии рыболовства (FTC, B)	Океанографический (OCC, C)
Управления ресурсами (RMC, D)	Морской окружающей среды (MHC, E)	Марикультуры (MCC, F)
Живых ресурсов (LRC, G)	Балтийский (BCC, H)	

Рекомендации РГ ИКЕС

Summary sheet NEA Macerel

3.12.3a Mackerel

Catch forecast for 2002:

F (2002)	Basis	SSB (2002)	Catch (2002)	Landings (2002) **N**	Landings (2002) **S**	Landings (2002) Total	SSB (2003)
0.15	lowest level agreements	4154	625	587	38	**625**	4181
0.17	F_{pa}	4126	703	660	43	**703**	4092
0.1835	F_{sq}	4108	754	708	46	754	4034
0.20	highest level agreements	4085	816	766	50	816	3964

Рекомендации РГ ИКЕС

3.12.3 Mackerel

State of stock/fishery: The combined stock is inside safe biological limits, but until results of the egg survey in 2001 are included in the assessment (in 2002) it is difficult to be confident about the accuracy of the assessment. The spawning stock biomass is above $\mathbf{B_{pa}}$, but the fishing mortality is just above $\mathbf{F_{pa}}$.

Рекомендации РГ ИКЕС

Advice on management:

ICES advises a fishing mortality in 2002 of no more than F_{pa} (0.17), corresponding to landings in 2002 of less than **703 000** t. ICES advises that the proposed TAC of 703 000 t covers all areas where North-East Atlantic mackerel are fished.

or

ICES advises the landings in 2002 to be no more than the agreed TAC's for 2001, **670 000 t**. ICES advises that the proposed TAC of 670 000 t covers all areas where North-East Atlantic mackerel are fished.

Доклад РГ ИКЕС

Advisory Committee on
Fishery Management

ICES CM 2002/ACFM:06

REPORT OF THE

T OF
ANCHOVY

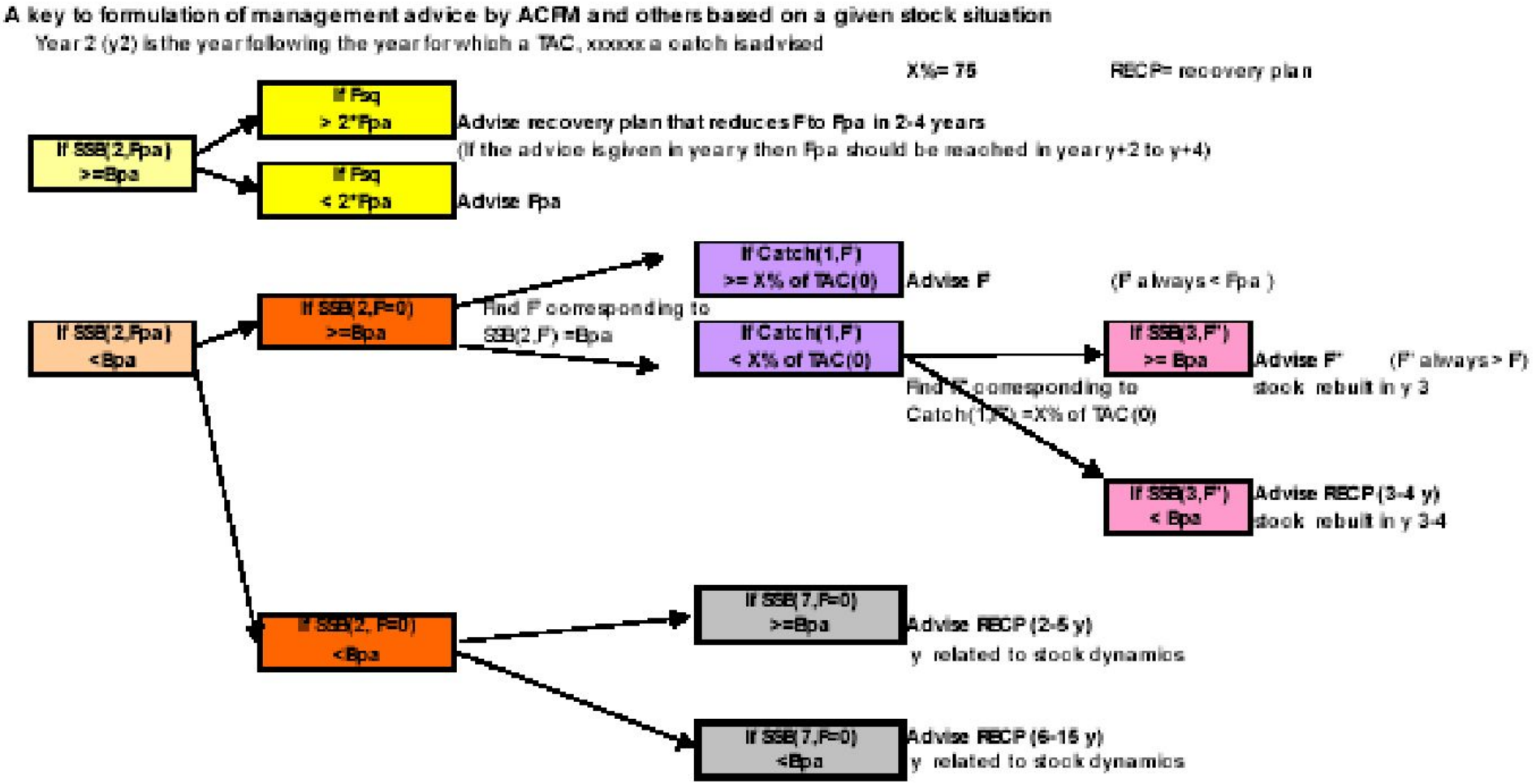
This report is not to be quoted without prior consultation with the General Secretary. The document is a report of an expert group under the auspices of the International Council for the Exploration of the Sea and does not necessarily represent the views of the Council

This report is not to be quoted without prior consultation with the General Secretary. The document is a report of an expert group under the auspices of the International Council for the Exploration of the Sea and does not necessarily represent the views of the Council

International Council for the Exploration of the Sea
Conseil International pour l'Exploration de la Mer

Palægade 2–4 DK-1261 Copenhagen K Denmark

Minutes ACFM



Minutes ACFM

MINUTES OF THE

nt

This report is not to be quoted without prior consultation with the General Secretary. The document is a report of an expert group under the auspices of the International Council for the Exploration of the Sea and does not necessarily represent the views of the Council

This report is not to be quoted without prior consultation with the General Secretary. The document is a report of an expert group under the auspices of the International Council for the Exploration of the Sea and does not necessarily represent the views of the Council.

International Council for the Exploration of the Sea

Conseil International pour l'Exploration de la Mer

Technical Minutes ACFM

TECHNICAL MINUTES OF SUB-GROUP REVIEW FOR NORTHERN PELAGIC AND BLUE WHITING

It was also noted that the difference is consistent with the large negative residuals for older fish from the 2001 Norwegian survey. Both surveys indicated several dense aggregations in small areas. The Russian survey data could not be formally included in the assessment, because it is the first year of the survey. Although the Sub-group recommended that the Russian survey be considered by the Working Group next year, it concluded that the information from the survey is consistent the information provided by the assessment.

Technical Minutes ACFM

To the ACFM technical minutes:

During the discussions related to the advice formulation for 2002 on North-East Arctic Cod V. Shibanov, the representative of Russian Federation made a statement:

1. The results of Arctic Fisheries Working Group-2001 proposed a revision of MBAL of North-East Arctic Cod based on a review and revision of historical databases of both Russian and Norwegian Research Institutes. This new $\mathbf{B_{pa}}$ level equal of 400 000 t was based on data on maturity and growth. The data and methods used were well documented in Chapter 10 of Working Group Report. The ACFM had ignored such a effort of a Working Group and used old level of $\mathbf{B_{pa}}$=500 000 t.

2. At the same time the TAC recommended by the scientists participated in Working Group was also changed by the Committee from the level of 33 200 t which is well corresponds to a accepted $\mathbf{F_{pa}}$=0.42.

It was stressed by the Russian representative that he was disappointed by the results of a discussion within of a Committee and can't accept the proposed advice. Such a game with figures has not a good basis for a future management and for a understanding of both scientists involved into investigations and fisheries managers.

He proposed to follow more close to the results of a specially called Working Group consisted of well experienced scientists of most countries – ICES members.

Technical Minutes ACFM

Advisory Committee on Fishery Management

INTERNAL DOCUMENT

This report is not to be quoted without prior consultation with the General Secretary. The document is a report of an expert group under the auspices of the International Council for the Exploration of the Sea and does not necessarily represent the views of the Council

NG

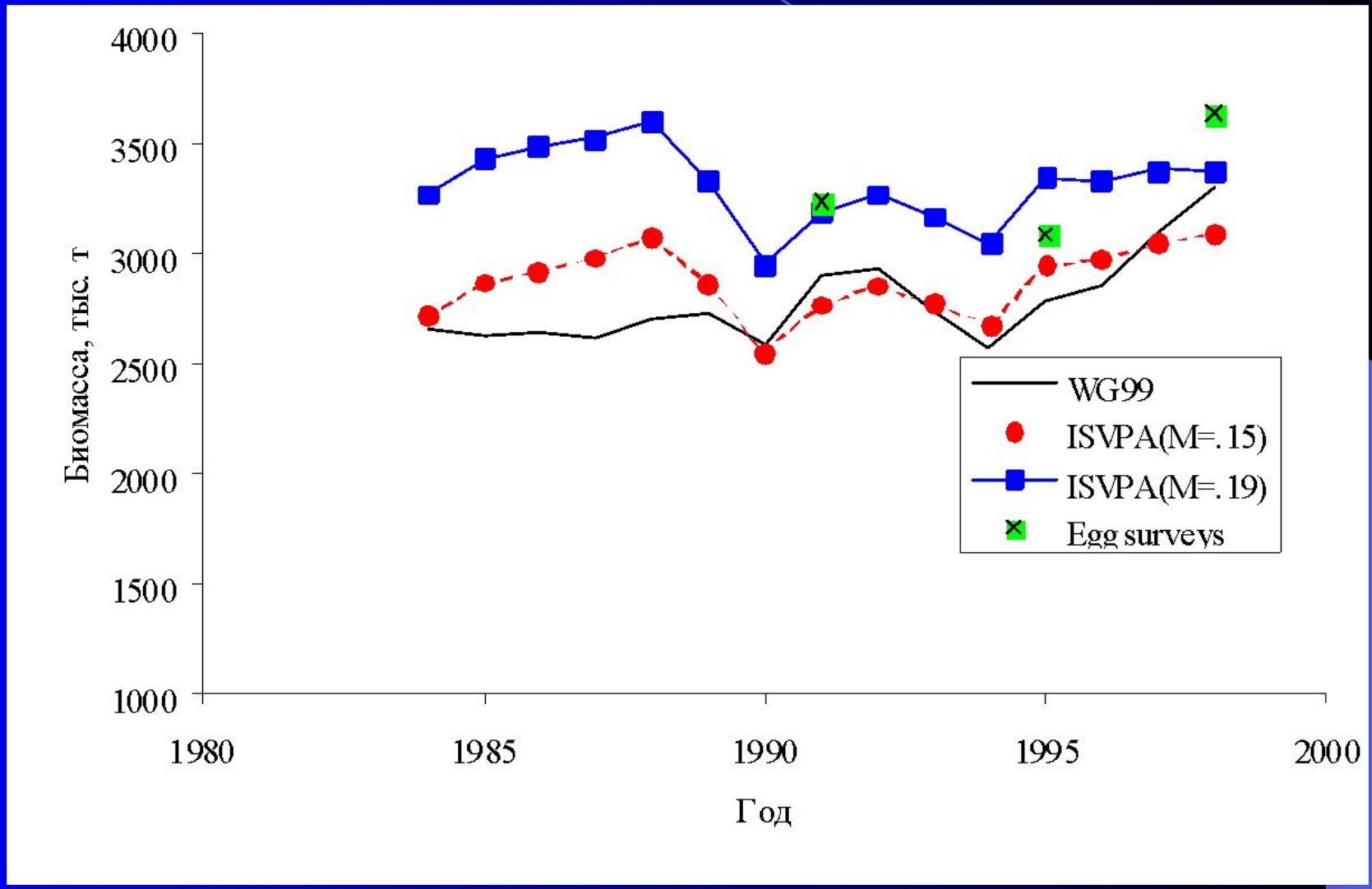
This report is not to be quoted without prior consultation with the General Secretary. The document is a report of an expert group under the auspices of the International Council for the Exploration of the Sea and does not necessarily represent the views of the Council.

International Council for the Exploration of the Sea

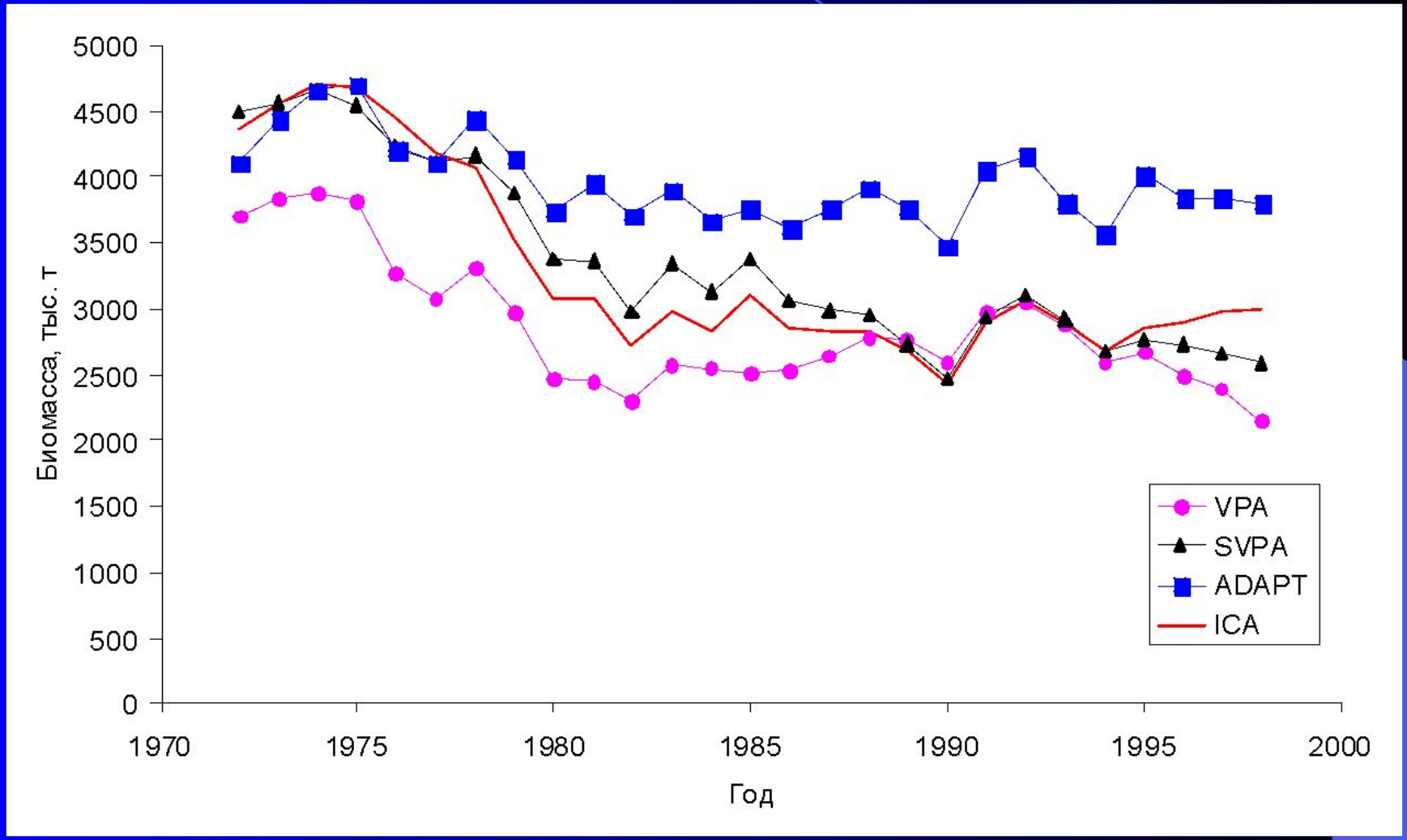
Conseil International pour l'Exploration de la Mer

Palægade 2-4 DK-1261 Copenhagen K Denmark

Расчет запаса с использование разных уровней M и результаты икряной съемки.



Расчет запаса скумбрии различными моделями ВПА.



Расчет запаса путассу различными моделями ВПА

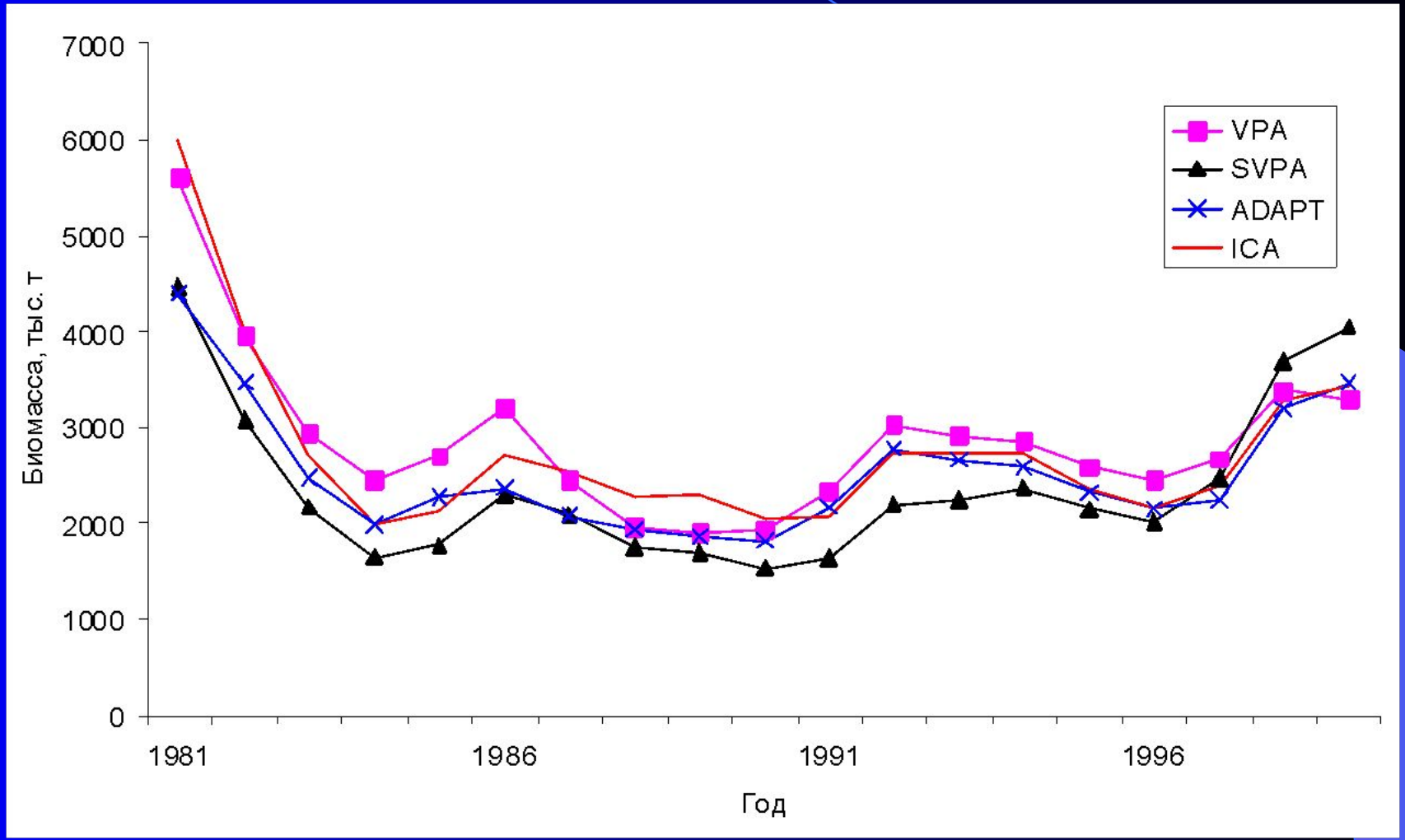


Схема прохождения «идей»

Доклад АКФМ

International Council for the Exploration of the Sea
Conseil International pour l'Exploration de la Mer

JUNE 2000

EXTRACT OF THE REPORT

OF

THE ADVISORY COMMITTEE ON FISHERY MANAGEMENT

ON

STOCKS IN

NORTH-EAST ARCTIC

NORTH-WESTERN AREAS

DEMERSAL STOCKS AT THE FAROE ISLANDS

SKAGERRAK and KATTEGAT

THE BALTIC

NORTH SEA

NORTH AND WEST OF SCOTLAND

IRISH SEA

CELTIC SEA

AND

WIDELY DISTRIBUTED AND MIGRATORY STOCKS

ICES
Palægade 2–4
DK-1261 Copenhagen K
Denmark

Mackerel (combined stock)

- Harvested outside safe biological limits
  - F just above F_{pa}
- Spawning stock well above B_{pa}
- Recruitment stable

Mackerel (combined stock) ICES Advice

- Fishing mortality no more than F_{pa} = 0.17, corresponding to a TAC in 2002 of <u>less than 694 000 t</u>
  - The TAC should cover all areas where North-East Atlantic mackerel are fished
- Assessment probably too optimistic!

Mackerel (combined stock)

- Management plan
  - Keep SSB above B_{pa} (2.3 mill. t) and F in the range 0.15-0.20
  - Ensure rapid recovery if SSB falls below B_{pa}
- ICES considers the plan to be consistent with the Precautionary Approach, if F on average is kept below $F_{pa} = 0.17$

Рекомендации АКФМ

3.1.2 Cod in Sub-areas I and II

3.1.2.a North-East Arctic cod

State of stock/fishery: The stock is outside safe biological limits. Fishing mortality in the last four years has been among the highest observed and well above F_{pa}, even above F_{lim}, and is not sustainable. SSB has been below B_{lim} since 1998. Surveys indicate below average 1998 and 2000 year classes and a very poor 1999 year class.

Management objective: In recent years, the advice has been to reduce fishing mortality below F_{pa} (=0.42) and to keep the spawning stock above 500 000 t, which was considered to be the minimum value required to have a low probability of bad recruitment. This approach was incorporated into a management objective in the years 1997–1999. The latest agreement in the Russian-Norwegian Fisheries Commission sets a TAC of 435 000 t (including 40 000 t Norwegian coastal cod) for 2001, 2002, and 2003. The intention is that this TAC could be revised either if the stock situation is more serious than known at the time of the agreement, or if the stock is assessed to be within safe biological limits. ICES considers that TACs under this agreement are well above those that would correspond to the application of the precautionary approach.

Precautionary Approach reference points: The biological information on historic stock and recruitment sizes has been revised. These revisions have affected some of the historic values substantially, with two consequences. Spawning biomasses associated with some historic recruitment are now estimated to have been lower, suggesting that current reference points may be slightly too high. However, the new data appears better to separate the strong environmental impact on recruitment from the biological productivity of the stock. The pattern suggests that the biological productivity of the stock at low SSB may be lower than previously thought, and this may affect the selection of the reference points. This will allow a more robust analysis of the biological dependency of recruitment on SSB, the results of which would be the basis for yet further revisions to reference points. Rather than revising the reference points this year and again next year when the analysis will further separate environmental and biological contributions to stock productivity, ICES continues to advise using the previous reference points. The advice in the short term would be very similar using either the present or the candidate revised reference points, and the medium-term consequences can be re-evaluated when the further analyses are complete.

Reference points (1998):

ICES considers that:	ICES proposes that:
B_{lim} is 112 000 t, the SSB below which no above-average year classes have been observed	B_{pa} is set at 500 000 t, the value below which the probability of below-average year classes increases
F_{lim} is 0.70	F_{pa} be set at 0.42. This value is considered to have a 95% probability of avoiding the F_{lim}

Technical basis:

$B_{lim} = B_{loss}$	B_{pa} = examination of stock-recruit plot
F_{lim} = Median value of F_{loss}	$F_{pa} = 5^{th}$ percentile of $F_{loss} = F_{lim} \times 0.6$

Advice on management: ICES recommends a considerable reduction in fishing mortality to well below F_{pa} (0.42). A rebuilding plan for this stock is required. Rebuilding the spawning stock to above the B_{pa} (500 000 t) by 2005 requires a F in 2002 of less than 0.25. This corresponds to catches in 2002 of less than 181 000 t. The rebuilding plan should also include measures ensuring that all catches are reported fully and that the exploitation pattern be improved.

Relevant factors to be considered in management: The TAC for 2001 was not considerably higher than recommended by ICES. The agreed TAC for 2002 (435 000 t, including 40 000 t of Norwegian coastal cod) is expected to be taken with a fishing mortality well above F_{pa}. As a result of this, SSB is expected to remain below B_{pa} in 2003.

Evidence of recent under-reporting of catches during the 1990s is accumulating. Both discards and unreported landings will reduce the effect of management measures and it is important that management agencies ensure that all catches are counted against the TAC regulations.

Since fishing mortality is still far above F_{lim} (0.24) the stock is growth-overfished.

The majority of the spawning stock comprises first time spawners. Evidence has shown that the eggs and larvae of first-time spawners are less viable than those of other mature fish, but also that the overall spawning period is reduced when the spawning stock consists of fewer age groups. Both these factors can reduce the reproductive potential of the stock for the same biomass.

Comparison with previous assessment and advice: In previous assessments, fishing mortality F(5-10) in the most recent years was often underestimated and stock numbers overestimated in the annual assessments of the stock. The current assessment does not present such retrospective patterns, although it is too early to infer whether this over/underestimation has ceased to be a problem for this assessment.

In the past, ICES has presented a TAC-constrained forecast for the intermediate year in prediction, rather than assuming *status quo* fishing mortality. This year ICES presents a *status quo* forecast for the following reasons:

- It is believed that under-reporting of catches continues to be a problem for this stock, in which case a TAC constraint is inappropriate;
- For NEA cod, a TAC constraint requires a reduction in fishing mortality compared to *status quo*, whilst for NEA haddock, (mostly caught in association with cod), an increase in fishing mortality would be required for a TAC constraint. This inconsistency suggests that the TAC constraint is being used as an *ad hoc* "fix" for assessments that provide uncertain catch forecasts from year to year, rather than reflecting an actual constraint on fishing mortality;
- The practice is consistent with most other stocks in the ICES area. Experience with TACs suggest that precise and unbiased assessments, as well as compelling reasons to assume that TACs act as a constraint on catches, are needed before applying a TAC constraint on forecasts.

Catch forecast for 2002:

Basis: $F_{sq} = F(2001)*(F(2000) = 0.91$; Landings (2001) = 582; SSB(2002) = 272.

F(2002)	Basis	Landings (2002)	SSB (2003)	Comment
0		0	611	
0.09	$0.10 * F_{sq}$	71	567	
0.12	$0.13 * F_{sq}$	92	553	$F_{0.1}$
0.18	$0.20 * F_{sq}$	138	526	
0.22	$0.24 * F_{sq}$	164	510	F_{max}
0.25	$0.27 F_{sq}$	182	500	$SSB_{2003} = B_{pa}$
0.36	$0.40 * F_{sq}$	259	453	
0.42	$0.46 * F_{sq}$	292	434	F_{pa}
0.54	$0.60 * F_{sq}$	366	391	
0.60	$0.66 * F_{sq}$	395	374	Agreed TAC 2002*
0.63	$0.70 * F_{sq}$	415	363	Agreed TAC 2002**
0.68	$0.75 * F_{sq}$	435	353	Agreed TAC 2002***
0.73	$0.80 * F_{sq}$	460	338	
0.82	$0.90 * F_{sq}$	504	315	
0.91	F_{sq}	544	293	F_{2001}

*assuming 40 000 t of the total quota taken as Norwegian Coastal cod
**assuming 20 000 t of the total quota taken as Norwegian Coastal cod
***assuming 0 t of the total quota taken as Norwegian Coastal cod.
Weights in '000 t.
Shaded scenarios considered inconsistent with the precautionary approach.

ОДУ

Ну и что дальше?

Все зависит от статуса запаса

Запас не регулируется

Запас регулируется одним государством

Запас регулируется несколькими государствами

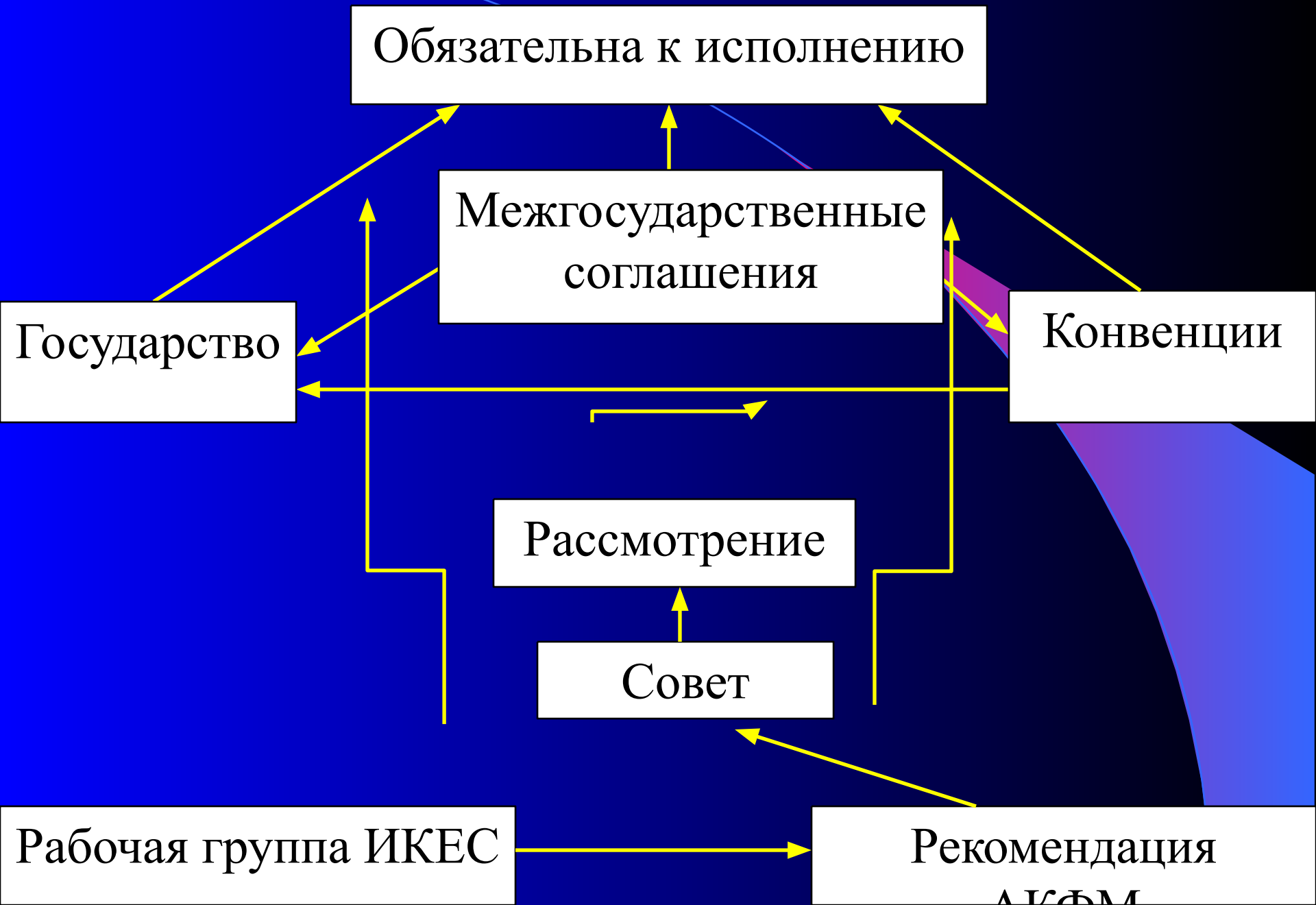
Запас регулируется Конвенцией (НЕАФК, НАФО)

Рекомендация ИКЕС – это только рекомендация.

Никто не обязан ей следовать или исполнять

Кроме случаев, если ее утвердили государства или Конвенции

Когда рекомендация становится обязательной?



Финиш

Надеюсь, что несильно утомил

Благодарю за внимание