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CENTRAL INTELLIGENCE AGENCY

WASHINGTON, D.C. 20505

29 June 1981

MEMORANDUM FOR: The Director of Central Intelligence
FROM : Max Hugel
Deputy Director for Operations
SUBJECT : [Redacted] Report

1. Enclosed is a [Redacted] report. For convenience of reference by NFIB agencies, the codeword [Redacted] has been assigned to the product of certain extremely sensitive agent sources of CIA's Directorate of Operations. The word [Redacted] is classified [Redacted] and is to be used only among persons authorized to read and handle this material.

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[Redacted]

Max Hugel

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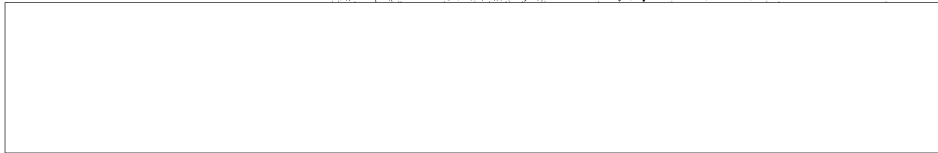
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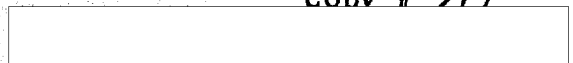
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Intelligence Information Special Report

COUNTRY Poland



DATE OF INFO. 1980

DATE 29 June 1981

SUBJECT

Warsaw Pact and NATO Naval Forces

SOURCE Documentary

Summary:

This report is a translation of a Polish document entitled "Appraisal of the Naval Forces of the Potential Enemy" and is classified SECRET. The report provides information on the navies of the FRG, Denmark, and Norway, and includes: the current status of naval vessels, naval aviation, and command and control systems; projected vessel strengths; and tactical-technical data on missile and torpedo craft, submarines, and fighter-bombers. In addition the report provides detailed information on:

- tactical-technical data on WP and NATO missiles,
- range and lift capacities of FRG and PPR aircraft, and
- mines in FRG, Danish, and PPR navies.

End of Summary

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APPRAISAL OF NAVAL FORCES OF THE POTENTIAL ENEMY

The Combined Naval Forces of the Baltic Straits and West Baltic (FRG and Denmark), and--to a small degree--the naval forces of Norway are considered as potential enemy naval forces. They consist of a definite majority of modern submarines and also powerful missiles and reconnaissance aviation. The prevailing developmental trend consists of further rapid equipping of assault naval and aviation forces with missiles, automation of their command and weapons guidance systems, and continuous modernization of naval aviation.

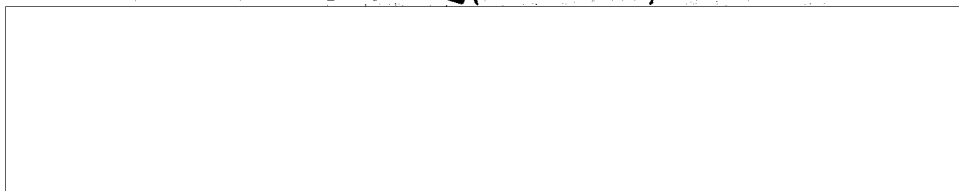
1. Current status of:

a) Vessels

Since 1970 the numerical strength of potential enemy assault ships has been essentially maintained at the same level. However their quality has been undergoing a rapid change and their combat capability is rapidly increasing. The main reason for this is that the ships are being outfitted with latest very low ceiling surface-to-surface missiles (HARPOON, EXOCET, PENGUIN), high speed long-range light guns (40 and 76-mm BOFORS and OTO MELARA), long-range (up to 28 km) wire-guided torpedoes (SEEAAL), and very high-speed (up to 60 knots) 38 cable length [kbl] range torpedoes (SEESCHLANGE), both torpedoes with automated guiding systems for combat use.

Missile cutters and submarines, which represent the highest level of technology and create the greatest threat to us are the following: 10 Type 143 missile cutters, 20 Type 148 missile cutters (FRG), 10 WILLEMOES-class missile cutters (Denmark), 18 Type 206 small submarines, and 6 Type 205 small submarines (FRG).

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The present landing ships of the potential enemy, are adapted for troop embarkment and landing on shores with unprepared beaches. The landing ships are characterized by their simple construction, and their provisional loading platforms permit formation of gangplanks for loading and unloading non-TOE landing equipment, especially landing barges. An estimate of their regular loading and unloading capacity for landing means (94 spaces for tanks) reveals that these landing ships are short of space for debarking troops in brigade strength or larger. However, the enemy can supplement these needs by regular modern landing means of other NATO member states, mainly those of Great Britain, or his own barges and transporters adapted for this purpose.

The minesweeping and minelaying forces have in practice began utilizing the TROIKA minesweeping system, and they are also undergoing a modernization process, which consists of conversion of 12 LINDAU-class minesweepers to minesweeper-destroyers (FRG). Two new minelayers of the LINDORMEN-class (Denmark) have also been put into operation.

b) Aviation

The basic type of aircraft of the naval aviation of the potential enemy is the F-104 fighter-bomber, armed with KORMORAN missiles designed for combatting medium and large naval targets. Furthermore, for searching, ranging, and combatting submarines as well as for long-range reconnaissance the enemy has also available 19 BREGUET-ATLANTIC type aircraft (including four for radioelectronic warfare purposes).

c) Weapons command and control systems

The Bundesmarine forces command relies on the following three automated systems:

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- MHQ--designed for commanding tactical large naval units, and also for collecting and displaying information;

- SATIR--designed for commanding destroyers, ensuring interception and tracking of aerial, surface, and underwater targets, analysis of the tactical situation, and selection of the most suitable type of armament for target destruction;

- AGIS--designed for commanding missile cutters, ensuring display of information on the combat situation surrounding the ship, and also automatic missile, artillery, and torpedo guidance.

The three systems mentioned above ensure comprehensive exchange of information between shore command posts and teams (groups) of tactical destroyers, missile (torpedo) cutters, and aircraft with the assistance of LINK radio communications lines, which are noted for their rapid relay of encrypted data.

The average information transmission times for the above specified systems are as follows:

- MHQ system--1-2 minutes;
- SATIR-1 system--7-10 seconds;
- AGIS system--10-20 seconds.

2. Estimated probable future status (approximately up to 1985):

It is not unlikely that the following forecasts on the naval forces of the potential enemy are overstated (for reasons of "publicity"), or understated (for reasons of military secrecy) since they were compiled on the basis of an analysis of available publications and statements of individuals in leading NATO military circles.

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a) Vessels

The basic aim of the potential enemy in development of naval forces is to increase the fire range and accuracy by outfitting ships with improved armaments, observation, and fire direction systems, and to decrease at the same time their overall size and number of crew members. An analysis of the naval forces development program indicates that their role and tasks will undergo further expansion. On the basis of progress of current scientific research and experimental projects (in the area of new ship designs) it can be concluded that in the eighties about one-half of the surface assault ships will be replaced by new generation units.

It can be assumed that missile ships and cutters, jointly with naval aviation and operational helicopters, will serve as the main assault force of the fleet assigned for operations in coastal areas and closed seas. Tasks for submarines will undergo further development and among other things it will be possible to utilize submarines as minelayers and carriers of surface-to-air missiles to be launched from a submerged position (against antisubmarine helicopters). For development of the landing forces the FRG will in all probability purchase (or produce under license) American JEFF landing hovercraft capable of lifting 54 tons.

In accordance with plans for development up to 1985 of naval forces of the potential enemy, the following changes can be anticipated:

- replacement (by 1984) of the FLETCHER-class and HAMBURG-class destroyers and KOELN-class frigates with the first 6 multipurpose Type 122 frigates (FRG), and introduction into operation of 3 or 6 multipurpose NIELS JUEL-class frigates (Denmark). Each of these ships will have 8 HARPOON surface-to-surface missile launchers and 8 surface-to-air short-range missile launchers;

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- replacement of the remaining ZOBEL-class torpedo cutters with 10 Type 143A missile cutters (modernized Type 143, FRG);

- replacement of 6 Type 205 submarines (FRG) and 6 NARHVALEN-class and DELFINEN-class submarines (Denmark)--all are obsolescent--with 12 Type 210 submarines (new FRG design);

- completion of conversion of 18 LINDAU-class fleet minesweepers to 12 mine destroyers (with French PAP system) and 6 ships to be utilized as guidance ships for the TROIKA system (FRG).

b) Aviation

The Naval forces of NATO countries attach special importance to development of assault aviation. It should be concluded that the tasks of assault aviation will in the near future be expanded, in comparison with the present period.

The Bundesmarine's basic assault aircraft will be the TORNADO (MRCA) multipurpose fighter-bomber aircraft, which is to be introduced as replacements for F-104G and RF-104G. It should be emphasized that the FRG naval aviation will be the first within the Bundeswehr to receive this aircraft, one wing at the beginning of 1982, and two wings in 1985. There is to be a total of 112 TORNADO aircraft in the FRG naval aviation.

Helicopters will also play a significant role. After Type 122 frigates are commissioned, the Bundesmarine will have SEA LYNX helicopters available for antisubmarine warfare and reconnaissance purposes, and for launching air-to-surface missiles. There will be 12 helicopters on 6 frigates.

Modernization is also planned of the ATLANTIC aircraft; by 1983 they will be equipped with more modern radioelectronic systems.

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c) Weapons command and control systems

Hand in hand with development of the naval forces, projects are continued on modernization of command systems. The FRG fleet command had contemplated putting into use by the end of 1979 an operational command system for the naval forces; it is based on the MHQ automated command system. In order to put this system into use, modernization of command posts is taking place (for instance in 1978 a new command post and communications centers were put into operation in the FLENSBURG-GLUECKSBURG area for the fleet commander). Equipping ships with combat information systems (SATIR-I and II, AGIS), satellite apparatus, and secure rapid-action communications will continue.

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NUMERICAL STRENGTH OF NAVAL VESSELS OF THE FRG, DENMARK,
AND NORWAY IN 1976-1985

Classification	CLASS	Number in 1976-1980			In the prospective years of 1981-1985			Comments
		FRG	DEN	NORW	FRG	DEN	NORW	
1	2	3	4	5	6	7	8	9
Missile Destroyers [MD]	LUTGENS HAMBURG	3	-	-	3	-	-	
		4	-	-	4	-	-	
		7	-	-	7	-	-	
Destroyers [D]	FLETCHER	4	-	-	4	-	-	
Missile frigates [MF]	P. SKRAM OSLO Type 122 KV-72	-	2	-	-	2	-	
		-	-	5	-	-	5	
		-	-	-	6	-	-	
		-	1	-	-	3	-	
		-	3	5	6	5	5	
Frigates [incl corvettes] [F]	KOELN TRITON HVIDBJORNEN SLEIPNER VADSO	6	-	-	6	-	-	
		-	3	-	-	-	-	
		-	5	-	-	5	-	
		-	-	2	-	-	2	
		-	-	1	-	-	1	
		6	8	3	6	7*	3	
Submarines [SUB]	Type 206 Type 205 NARVAHLEN DELFINEN Type 207	18	-	-	18	-	-	
		6	-	-	6	-	-	
		-	2	-	-	2	-	
		-	4	-	-	4	-	
		-	-	15	-	-	15	
		24	6	15	24	6	15	
Fast attack missile craft [FAMC]	Type 143 Type 143A Type 148 WILLEMOES STORM SNOGG HAUK	10	-	-	10	-	-	
		-	-	-	10	-	-	
		20	-	-	20	-	-	
		-	10	-	-	10	-	
		-	-	20	-	-	20	
		-	-	6	-	-	8	
		-	-	-	-	-	14	
		30	10	26	40	10	40*	
Fast attack torpedo craft [FATC]	Type 142 SOLOVEN TJELD	10	-	-	10	-	-	
		-	6	-	-	6	-	
		-	-	19	-	-	19	
		10	6	19	10	6	19	
Large chaser	THETIS	5	-	-	5	-	-	
Small chaser	DAPHNE	-	9	-	-	9	-	

[*Note: Totals are not accurate in the original.]

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1	2	3	4	5	6	7	8	9
Inshore minesweepers	SCHJETZE	22	-	-	-	-	-	
	LINDAU-331B	18	-	-	12	-	-	
	TROIKA sys	-	-	-	6	-	-	
	ARIADNE	8	-	-	8	-	-	
	FRAUENLOB	10	-	-	10	-	-	
	SUND	-	8	-	-	8	-	
	SAUDA	-	-	10	-	-	10	
M-70	-	-	1	-	-	1		
		58	8	11	36	8	11	
Minelayers	SACHSENWALD	2	-	-	2	-	-	
	FALSTER	-	3	-	-	3	-	
	LINDORMEN	-	2	-	-	2	-	
	LANGELAND	-	1	-	-	1	-	
	VIDAR	-	-	2	-	-	2	
	BORGEN	-	-	1	-	-	1	
			2	6	3	2	9	5
Landing craft	LCU	22	-	-	22	-	-	
	LCM	28	-	-	28	-	-	
	LCT	-	-	7	-	-	7	
		50	-	7	50	-	7	
Patrol shps	Misc	8	19	13	8	25	22	
Minesweepers	Misc	2	-	-	2	-	7	
Oilers (Tankers)	Misc	10	2	-	12	2	-	
Tender ships	Misc	10	1	1	10	1	1	
Supply vessels	Misc	8	-	3	10	-	.	
Other auxiliary vessels	Misc	20	12	-	.	.	.	
Rdoelct recon ships	ALSTER	2	-	-	2	.	.	
	OSTE	1	-	-	1	.	.	
		3	-	-	3	-	-	

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BASIC TACTICAL-TECHNICAL DATA ON FAST ATTACK MISSILE CRAFT [FAMC],
FAST ATTACK TORPEDO CRAFT [FATC] AND SUBMARINES OF FRG, DENMARK, AND NORWAY

Class	Number	Year of commission	Displacement (t)	Armament
1	2	3	4	5
Type 143 FAMC (FRG)	10	1975/76	378	4xML* EXOCET 2xTL* 533-mm SEEALL 2x76-mm OTO MELARA
Type 148 FAMC (FRG)	20	1973/75	265	4xML EXOCET 1x76-mm OTO MELARA 1x40-mm BOFORS
Type 142 FATC (FRG)	10	1961/63	225	2xTL 533-mm SEAL 2x40-mm BOFORS
TB-68 WILLEMOES FAMC (Denmark)	10	1977/78	240	4xML HARPOON 4xTL 533-mm 1x57-mm BOFORS
SOLOVEN FATC (Denmark)	6	1965/67	114	4xTL 533-mm 2x40-mm BOFORS
STORM FAMC (Norway)	20	1965/68	125	6xML PENGUIN 1x40-mm
SNOGG FAMC	6	1970/71	125	4xML PENGUIN 1x40-mm 2xTL 533-mm
TJELD FATC	19	1960/64	82	4xTL 533-mm 1x40-mm 1x20-mm
Type 206 sub (FRG)	18	1973/75	400 600	8xTL 533-mm SEESCHLANGE
Type 205 sub (FRG)	6	1963/67	370 450	8xTL 533-mm 16 mines
DELFINEN sub (Denmark)	4	1956/58	592 643	4xTL 533-mm
Type 207 sub (Norway)	15	1964/67	370 435	8xTL 533-mm

[*ML = missile launcher;
TL = torpedo launcher]

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BASIC TACTICAL-TECHNICAL DATA ON FIGHTER-BOMBER AIRCRAFT
OF FRG, DENMARK, AND NORWAY

Model 1	Version 2	On hand 3	Velocity (V) km/h 4	Range (D) Radius (R) km 5	Armaments lifting cap (kg) 6	Armament 7
MRCA-75 TORONADO	fighter, fighter-bomber, reconnaissance	FRG (naval avn as of 1981)	2,500	D=2,920	6,112	4xKORMORAN GM, 2xSPARROW GM, 12xMK-82 bombs, 2 rdoelct containers 2x27-mm guns
F-104G STARFIGHTER	Fighter: F-104C, F-104B, F-104D. Fighter-bomber: CF-104, F-104S. Recon: RF-104G	FRG (naval avn), Denmark, Norway	2,330	D=3,510 R=1,225	1,800	2xKORMORAN GM, 4xSPARROW GM, 3x500-1,000 lb bombs
F-4E PHANTOM	Fighter-bomber: F-4A, F-4C, F-4D Recon: RF-4B, RF-4C, RF-4E	FRG	2,550	D=4,800	8,200	6xSPARROW GM, 4xBULLPUP or SCHRIKE GM, 24x250-500 lb bombs
J-35D DRAKEN	Fighter: J-35A, J-35B, J-35F, Recon: S-35E, Fighter-Bomber: SAAB-35	Denmark	2,120	D-3,250 R=1,000	1,200	4xSIDEWINDER GM, 12xBOFORS unguided rkt, 2x500 kg bombs
F-5A FREEDOM FIGHTER	Fighter-bomber: CF-5A, SF-5A, NF-5A Recon: RF-5A	Norway	1,500	D=3,000 R=1,400	2,800	2xSIDEWINDER GM, 1x2,000 lb bomb or 2x500 lb bombs
F-100D SUPER SABRE	Fighter-bomber: F-100F, F-100C	Denmark	1,480	D-3,300 R=920	3,400	2xBULLPUP GM, 4xSIDEWINDER GM, 6 bombs up to 1,000 lb
G-91 FIAT	Fighter-bomber- Recon: G-91R/1 G-91R/3 G-91R/4	FRG	1,075	D=2,200 R=400	700	2xAS-30 GM, 2x250 kg bombs
BR-1150 ATLANTIC	ASW, rdoelct reconnaissance	FRG naval avn	625	D-9,200	7,200	depth bombs, HVAR-unguided rkt, ASW torpedoes, 8-10 mines
P-3C ORION	Patrol: P-3A, P-3B ASW, rdoelct warfare	Norway	762	D=10,000	8,700	depth bombs, 8 ASW torpedoes, 13x1,000 lb mines, 6x2,000 lb mines

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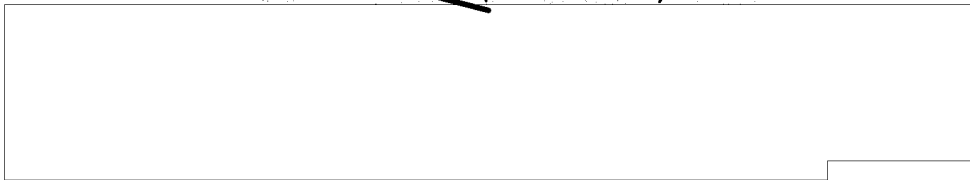
BASIC TACTICAL-TECHNICAL PARAMETERS OF MISSILE ARMAMENTS

[NATO missiles]			[Warsaw Pact missiles]			
STANDARD RIM-66A	HARPOON	EXOCET MM-38	Technical-tactical characteristics	P-15	P-20	Rz-61
1	2	3	4	5	6	7
SAM SSM	SSM	SSM	Missile class	SSM	SSM	SAM SSM
24	110	38	Missile range (km)	40	80	16
15	15	3-15	Flight altitude (m)	100-300	50	.
700	300	330	Cruising speed (m/sec)	315	315	750
590	635	720	Launching weight (kg)	2,125	2,560	959
50	227	150	Warhead weight (kg)	510	510	70
4.25x0.30 x1.0	4.57x0.343 x0.914	5.1x0.34 x1.0	Dimensions (m)=length x diameter x wing span	5.55x0.76 x2.40	.	5.95x0.375 x1.192
0.28	0.37	0.36	Missile cross section area (m ²)	1.82	1.82	0.44
Guidance beam	Programmed guidance	Programmed guidance	Method of guidance in flight	Programmed guidance	Programmed guidance	Radio command guidance beam
Semi-active radar	Active radar	Active radar	Method of guidance in homing	Active radar	Active radar	
3.0	.	5.5	Dead zone (km)	8.0	8.0	3.7
		up to 1.5 min	Time for preparing missile firing and launching data	up to 3 min from the cold; up to 1 min from alert status		

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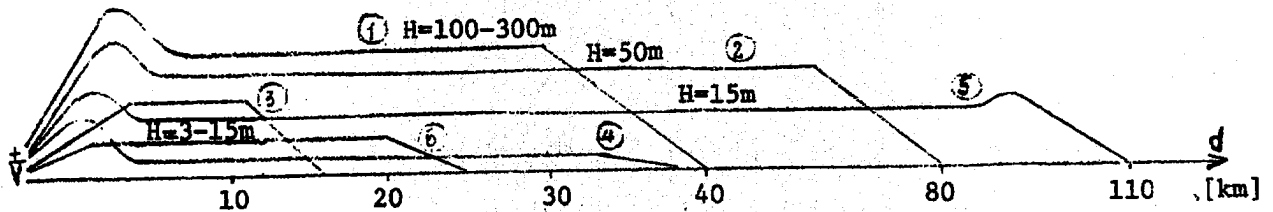
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COMPARISON OF BASIC TACTICAL-TECHNICAL PARAMETERS OF
NAVAL VESSEL MISSILE ARMAMENTS OF COMNAVBALTAP (FRG AND DENMARK)
AND THOSE OF PPR

A. FLIGHT PROFILE AND RANGE OF MISSILE ARMAMENTS

- | | |
|----------------------------------|-----------------------------|
| 1. P-15 missile | 4. EXOCET missile |
| 2. P-20, P-21, and P-22 missiles | 5. HARPOON missile |
| 3. RZ-61 missile | 6. STANDARD RIM-66A missile |



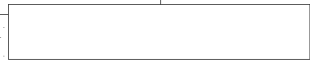
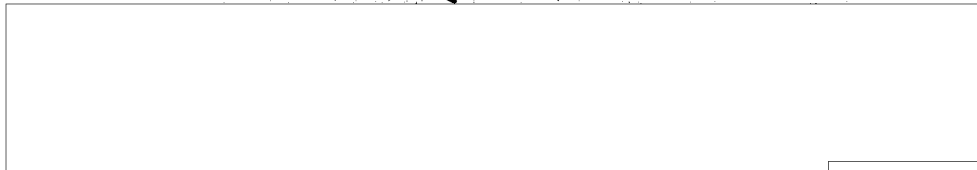
NOTE: 1241RE type cutter is equipped with P-20, 21, and 22 missiles

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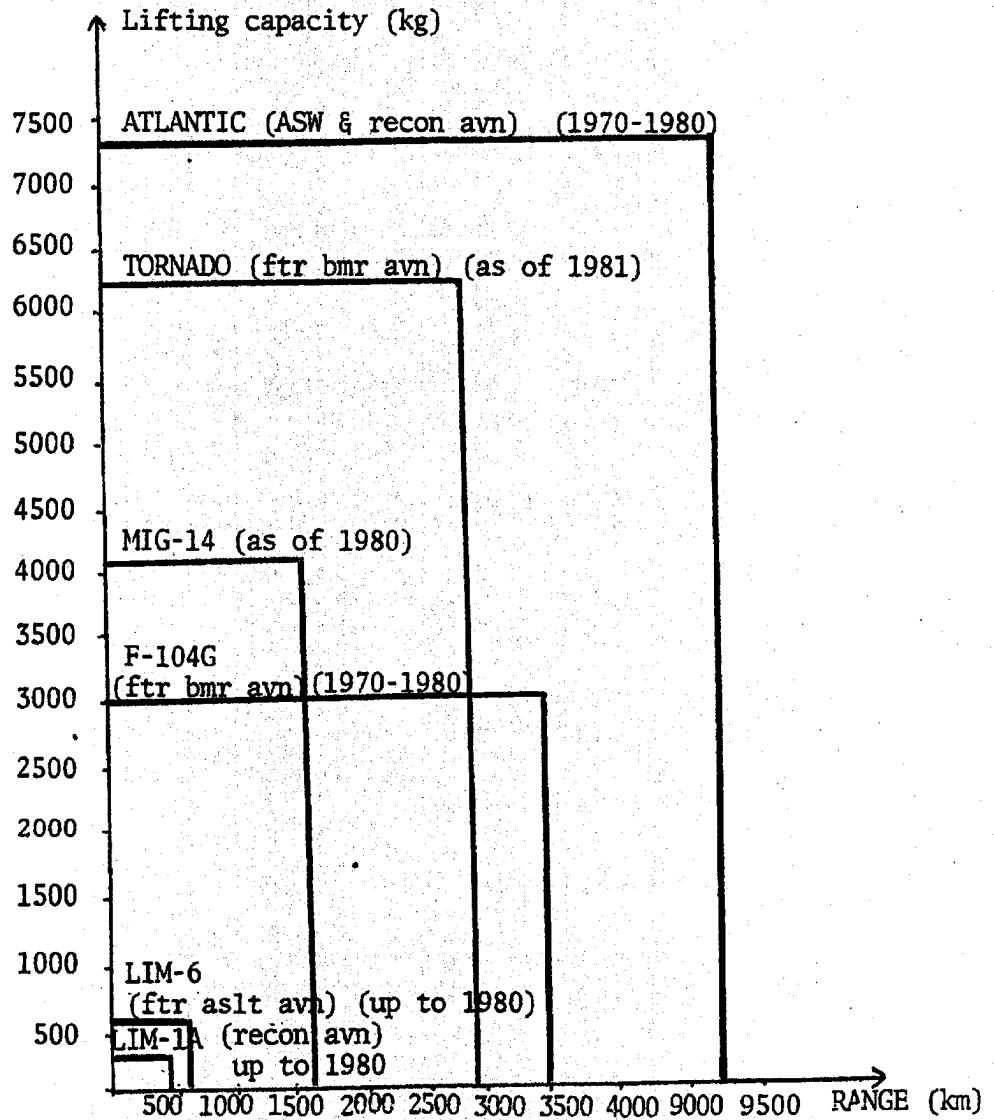
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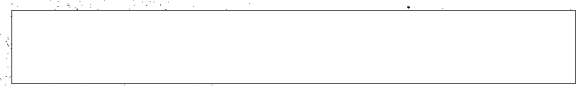


RANGE AND LIFTING CAPACITY OF AIRCRAFT AND HELICOPTERS OF FRG AND PPR NAVAL AVIATION



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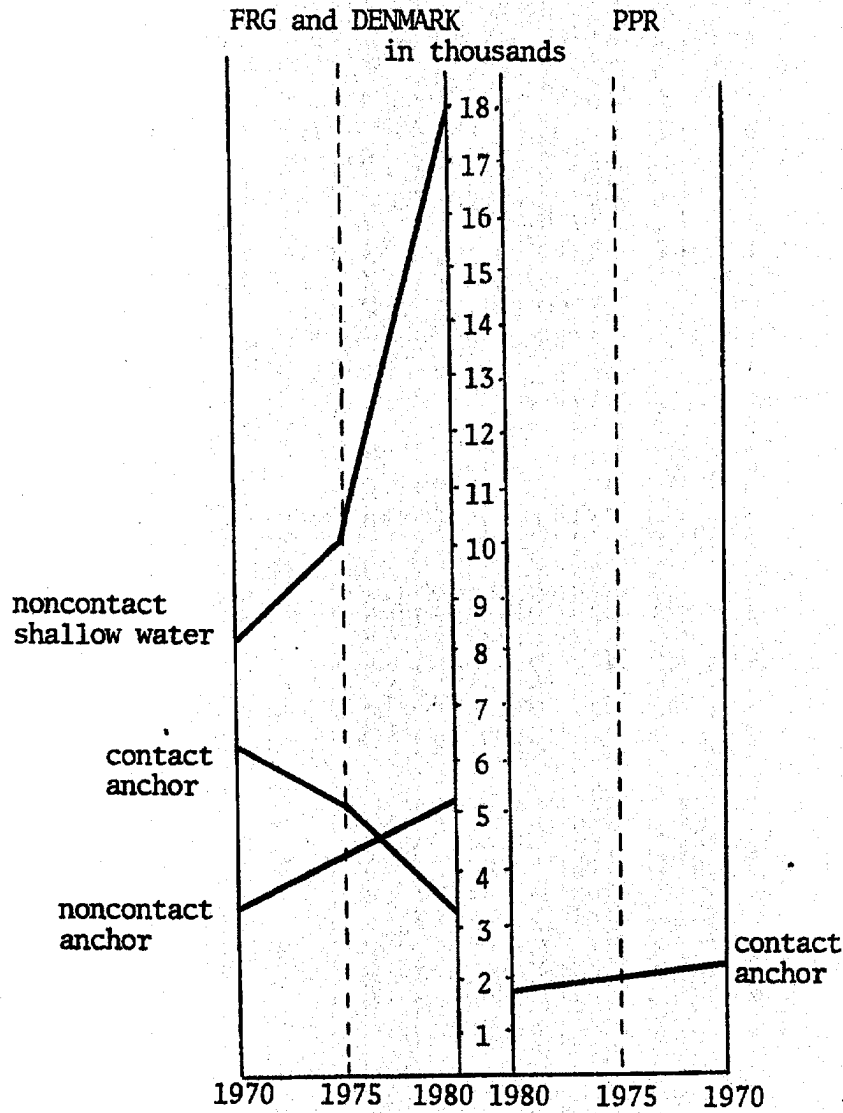
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TYPES OF MINES AND NUMERICAL QUANTITY IN THE NAVIES OF THE FRG, DENMARK, AND PPR



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