Appendix 10

JOINT NORWEGIAN – RUSSIAN SCIENTIFIC RESEARCH PROGRAM ON LIVING MARINE RESOURCES IN 2006

Contents

1. Planning and coordination of investigations and submitting of results

This program contains the investigations to be carried out in 2006 by Norway and Russia within the frames of the bilateral cooperation between the Norwegian and the Russian Parties. The program is in accordance with the national research programmes.

Planning, coordination, accomplishment of the investigations, exchange of specialists, data and results will be settled between the two institutes involved.

Scientists and specialists from PINRO and IMR will meet in Norway on 20-24 March 2006, to discuss joint research programmes, results from surveys and investigations in 2005/2006 and to coordinate survey plans for the rest of 2006. Missing names on vessels and time periods for surveys in this report will be submitted, latest at the March meeting. Future plans for surveys and methodology for preparing biological and acoustic data will be discussed and coordinated. Urgent information according to surveys carried out before the meeting in March will be exchanged by correspondence.

By October 2005, 3 reports have been issued in the Joint IMR-PINRO report series.

A preliminary program for the planned surveys and cooperation for 2006 is presented below.

2. Investigations on fish and shrimp stocks, including stock size, -structure, and distribution

IMR and PINRO will continue the co-operation on the monitoring of the most important commercial fish and shrimp stocks, according to the program listed below. The work will also include continued co-operative research on:

- the stock structure of Northeast arctic cod, based on the joint research program in 2006.
- shrimp research as recommended by the ICES/NAFO working group – with the objective to give recommendations that include the conservation of biodiversity
- by-catch of juvenile fish in the shrimp fishery

Norwegian investigations

Nation:	Norway	Survey title:	Herring spawning area
Organisation:	IMR, University of Bergen		
Time period:	16.02 – 02.03	Vessel:	R/V “Håkon Mosby”
Target species:	Herring	Secondary species:	
Area:	Herring spawning areas off Norwegian coast from 58º-63ºN		
Purpose:	Spawning migration and behaviour		
Reported to:	Internal IMR survey report WGNPBW 2006		

Nation:	Norway	Survey title:	Young pelagic Greenland halibut
Organisation:	IMR		
Time period:	31.07 – 04.09	Vessel:	Hired commercial fishing vessel
Target species:	Greenland halibut *Sebastes mentella*	Secondary species:	*S. marinus*
Area:	Barents sea, north and east of Spitsbergen		
Purpose:	Distribution of young Greenland halibut		
Reported to:	Internal IMR survey report, ICES AFWG 2006		

Nation:	Norway	Survey title:	Tagging experiment Greenland halibut
Organisation:	IMR		
Time period:	04.09 – 02.10	Vessel:	Hired long-liner
Target species:	Greenland halibut	Secondary species:	
Area:	68ºN - 80ºN		
Purpose:	Tagging survey and fishing experiments		
Reported to:	Internal IMR survey report, ICES AFWG 2006		

Nation:	Norway	Survey title:	Adult pelagic Greenland halibut
Organisation:	IMR		
Time period:	31.07 – 04.09	Vessel:	Hired trawler
Target species:	Greenland halibut *Sebastes mentella*	Secondary species:	*S. marinus*
Area:	62ºN - 70ºN, 400 – 1500 meter depth + Bear Island channel		
Purpose:	Trawl survey with fixed trawl stations		
Reported to:	Internal IMR survey report, ICES AFWG 2006		

Nation:	Norway	Survey title:	Cod spawning stock
Organisation:	IMR		
Time period:	17.03 – 08.04	Vessel:	R/v Johan Hjort
Target species:	Cod	Secondary species:	Haddock, Saithe
Area:	Spawning areas Troms – Lofoten		
Purpose:	Acoustic survey of the North East Arctic Cod spawning stock. Investigations on maturity, fecundity and egg abundance.		
Reported to:	Internal IMR survey report, ICES AFWG 2006		

Nation:	Norway	Survey title:	Herring larvae
Organisation:	IMR		
Time period:	23.03 – 12.04	Vessel:	R/v Håkon Mosby
Target species:	Herring	Secondary species:	Saithe
Area:	Norwegian shelf areas from Andenes to Karmøy		
Purpose:	Distribution and abundance of herring larvae		
Reported to:	Internal IMR survey report, WGNPBW 2006		

Nation:	Norway	Survey title:	Norwegian Sea survey
Organisation:	IMR		
Time period:	25.04 – 31.05	Vessel:	R/v G.O. Sars
Target species:	Herring, Blue whiting	Secondary species:	Zooplankton
Area:	Norwegian Sea		
Purpose:	Acoustic abundance estimation of pelagic fish and plankton, hydrography		
Reported to:	Internal IMR survey report, WGNPBW 2006, ICES PGSPFN 2006		

Nation:	Norway	Survey title:	Greenland halibut, trawl CPUE

Organisation:	IMR		
Time period:	16.05 – 23.05	Vessel:	hired commercial trawler
Target species:	Greenland halibut	Secondary species:	
Area:	Troms – Spitsbergen 70º30'N - 73º30'N (6 days), 73º30'N - 76º00'N (5 days)		
Purpose:	Abundance of Greenland halibut based on catch rates by commercial trawl (CPUE)		
Reported to:	Internal IMR survey report, ICES AFWG 2007 and PINRO		

Nation:	Norway	Survey title:	Bottom trawl survey Greenland halibut
Organisation:	IMR		
Time period:	01.08 – 24.08	Vessel:	hired commercial vessel
Target species:	Greenland halibut *Sebastes mentella*	Secondary species:	*S. marinus*
Area:	68ºN - 80ºN, 400 – 1500 meter depth		
Purpose:	Bottom trawl survey with fixed trawl stations		
Reported to:	Internal IMR survey report, ICES AFWG 2007		

Nation:	Norway	Survey title:	Fjord and coastal ecosystem survey
Organisation:	IMR		
Time period:	10.10 – 10.11 10.10 – 09.11	Vessel:	R/V "Johan Hjort" R/V "Jan Mayen"
Target species:	Saithe, coastal cod, 0-group herring	Secondary species:	Haddock, *Sebastes marinus*
Area:	North Norwegian fjord and coastal areas from Varanger to Møre.		
Purpose:	Acoustic and trawl abundance estimation of saithe, coastal cod and other groundfish species. Acoustic abundance estimation of 0-group herring. Environmental investigations		
Reported to:	Internal IMR survey report, WBNPBW 2007, AFWG 2007		

Nation:	Norway	Survey title:	Herring wintering area
Organisation:	IMR		
Time period:	10.11 – 30.11	Vessel:	Hired commercial fishing vessel
Target species:	Herring	Secondary species:	
Area:	Vestfjorden and shelf areas outside Lofoten-Vesterålen		
Purpose:	Acoustic abundance estimation and distribution of herring		
Reported to:	Internal IMR survey report, WGNPBW 2007		

Nation:	Norway	Survey title:	Tagging of herring
Organisation:	IMR		
Time period:	15.03 – 15.04	Vessel:	Hired vessel
Target species:	Herring	Secondary species:	Other pelagic fish
Area:	Vestfjorden and shelf areas outside Lofoten-Vesterålen		
Purpose:	Tagging of herring		
Reported to:	Internal IMR report, WGNPBW 2007		

Russian investigations

Nation:	Russian	Survey title:	Greenland halibut, CPUE
Organisation:	PINRO		
Time period:	01.01-30.03	Vessel:	2 trawlers
	01.04-30.06		2 trawlers
Target species:	Greenland halibut	Secondary species:	Cod, haddock, catfishes, redfish
Area:	Exclusive Economic Zone of Norway between 70°00'-73°30'N		
Purpose:	Investigation into the stock status, year-to-year dynamics of catch per unit effort, comparative fishing efficiency "long-line – trawl", mass tagging. Determination of density of Greenland halibut distribution under natural conditions with the use of video-acoustic complexes.		
Reported to:	PINRO survey report for internal use; ICES AFWG in 2006 and 2007		

Nation:	Russian	Survey title:	Greenland halibut, CPUE
Organisation:	PINRO		
Time period:	01.01-31.03	Vessel:	2 trawlers
	01.04-30.06		2 trawlers
Target species:	Greenland halibut	Secondary species:	Cod, haddock, catfishes, redfish
Area:	Area adjacent to Spitsbergen between 73°30' – 78°00'N		
Purpose:	Investigation into the stock status, year-to-year dynamics of catch per unit effort, comparative fishing efficiency "long-line – trawl", mass tagging. Determination of density of Greenland halibut distribution under natural conditions with the use of video-acoustic complexes.		
Reported to:	PINRO survey report for internal use; ICES AFWG in 2006 and 2007		

Nation:	Russian	Survey title:	Greenland halibut, CPUE
Organisation:	PINRO		
Time period:	01.01-31.03	Vessel:	1 long-liner
	01.04-30.06		1 long-liner
Target species:	Greenland halibut	Secondary species:	Cod, haddock, catfishes, redfish
Area:	NEZ and area adjacent to Spitsbergen between 70°00' – 78°00'N		
Purpose:	Investigation into the stock status, year-to-year dynamics of catch per unit effort, comparative fishing efficiency "long-line – trawl"		
Reported to:	PINRO survey report for internal use; ICES AFWG in 2006 and 2007		

Nation:	Russian	Survey title:	Cod, haddock, CPUE
Organisation:	PINRO		
Time period:	01.01-31.03	Vessel:	1 long-liner
	01.04-30.06		1 long-liner
Target species:	Cod, haddock	Secondary species:	Catfishes, skates, tusk
Area:	NEZ and area adjacent to Spitsbergen between 70°00' – 78°00'N		
Purpose:	Study of fish resources for long-line fishery, morphophysiological characteristics and structure of concentrations		
Reported to:	Survey report for internal use; ICES AFWG in 2006 and 2007		

Nation:	Russian	Survey title:	Cod, haddock, CPUE
Organisation:	PINRO, VNIRO		

Time period:	01.01-31.03 01.04-30.06	Vessel:	1 long-liner 2 long-liners
Target species:	Cod, haddock	Secondary species:	Catfishes, skates, tusk
Area:	Exclusive Economic Zone of Russian Federation and "Grey zone"		
Purpose:	Study of fish resources for long-line fishery, morphophysiological characteristics and structure of concentrations		
Reported to:	Survey report for internal use; ICES AFWG in 2006 and 2007		

Nation:	Russian	Survey title:	Cod, haddock
Organisation:	PINRO		
Time period:	10.01-10.04	Vessel:	5 trawlers
Target species:	Cod, haddock	Secondary species:	Catfishes, skates, tusk
Area:	Exclusive Economic Zone of RF and "Grey zone", inland sea waters and territorial waters of the Russian Federation		
Purpose:	Collection of data on distribution and biological status during wintering and spawning, study of trophic links "predator – prey", intra-species structure using genetic methods, quantitative estimation of by-catch of undersized fish.		
Reported to:	Survey report for internal use; ICES AFWG in 2006 and 2007		

Nation:	Russian	Survey title:	Improvement of TAS method, update of catchability coefficients of survey trawl
Organization:	PINRO		
Time period:	01.06-30.11	Vessel:	1 trawler
Target species:	Cod, haddock, Greenland halibut	Secondary species:	catfishes, redfish, long rough dab, saithe and others
Area:	Area adjacent to the Spitsbergen, "Grey zone", Exclusive Economic Zone of the Russian Federation		
Purpose:	Autonomous underwater video acoustic computer equipment is used for underwater video recording of demersal fish and estimation of catchability coefficient of the survey trawl		
Reported to:	For internal use by PINRO and IMR ***survey will be conducted by the Russian party if additional catch volumes for scientific research are allocated from its national quotas***		

Nation:	Russian	Survey title:	Cod, haddock
Organisation:	PINRO		
Time period:	15.01-31.03	Vessel:	5 trawlers
Target species:	Cod, haddock	Secondary species:	Catfish, long rough dab, saithe, redfish, Greenland halibut
Area:	Exclusive Economic Zone of Norway, "Grey zone", "Loophole" areas and area adjacent to Spitsbergen		
Purpose:	Collection of data on distribution and biological status during wintering and spawning, species composition in catches, study of trophic links "predator – prey" and other ecological relations.		
Reported to:	PINRO survey report for internal use; ICES AFWG in 2006 and 2007		

Nation:	Russian	Survey title:	Distribution and migration of spawning and post-spawning herring
Organisation:	PINRO		

Time period:	01.02-31.03	Vessel:	1 trawler
Target species:	herring	Secondary species:	Other pelagic species
Area:	The Norwegian Sea		
Purpose:	Study of herring distribution, collection of biological data for the stock assessment		
Reported to:	PINRO survey report for internal use; ICES WG NPBW in 2005		

Nation:	Russian	Survey title:	Cod, haddock
Organisation:	PINRO, VNIRO		
Time period:	01.04-30.06	Vessel:	5 trawlers
Target species:	Cod, haddock	Secondary species:	Catfish, plaice, long rough dab, saithe, redfish
Area:	Exclusive Economic Zone of Russia, "Grey zone", inland sea waters and territorial waters of the Russian Federation		
Purpose:	Collection of data on distribution and biological status during wintering and spawning, species composition in catches, study of trophic links "predator – prey".		
Reported to:	PINRO survey report for internal use; ICES AFWG in 2007		

Nation:	Russian	Survey title:	Cod, haddock
Organisation:	PINRO		
Time period:	01.04-30.06	Vessel:	5 trawlers
Target species:	Cod, haddock	Secondary species:	Catfish, long rough dab, saithe, redfish, Greenland halibut
Area:	Exclusive Economic Zone of Norway, "Grey zone", "Loophole" area and area adjacent to Spitsbergen		
Purpose:	Collection of data on distribution and biological status during feeding migration, species composition in catches, study of trophic links "predator – prey" and genetic structure of cod population		
Reported to:	PINRO survey report for internal use; ICES AFWG in 2006		

Nation:	Russian	Survey title:	Cod, haddock
Organisation:	PINRO		
Time period:	01.05-31.10	Vessel:	1 trawler
Target species:	Cod, haddock	Secondary species:	Other demersal fish species
Area:	"Grey zone" area and area adjacent to Spitsbergen		
Purpose:	Develop and ground technical regulation measures for trawl fisheries for cod and haddock.		
Reported to:	PINRO survey report for internal use. ***survey will be conducted by the Russian party if additional catch volumes for scientific research are allocated from its national quotas***		

Nation:	Russian	Survey title:	Redfish *Sebastes mentella*
Organisation:	PINRO		
Time period:	01.04-31.05	Vessel:	1 trawler
Target species:	Redfish *Sebastes mentella*	Secondary species:	Other demersal fish species
Area:	Exclusive Economic Zone of Norway and area adjacent to Spitsbergen		
Purpose:	Assessment of redfish abundance and biomass, oceanography		

Reported to:	PINRO survey report for internal use; ICES AFWG in 2006 and 2007 ***survey will be conducted by the Russian party if additional catch volumes for scientific research are allocated from its national quotas***

Nation:	Russian	Survey title:	Shrimp and demersal fishes
Organisation:	PINRO		
Time period:	01.04-31.05	Vessel:	1 trawler
Target species:	Shrimp and demersal fishes	Secondary species:	Other demersal fishes
Area:	"Grey zone", Exclusive Economic Zone and inland sea waters and territorial waters of the Russian Federation		
Purpose:	Assessment of shrimp abundance and distribution		
Reported to:	PINRO survey report for internal use; Joint ICES/NAFO WG on shrimp in 2006 ***survey will be conducted by the Russian party if additional catch volumes for scientific research are allocated from its national quotas***		

Nation:	Russian	Survey title:	Survey for haddock, saithe and other demersal species
Organisation:	PINRO		
Time period:	01.04-30.06	Vessel:	2 trawlers
Target species:	Haddock, saithe, cod	Secondary species:	Other demersal fishes
Area:	"Grey zone", Exclusive Economic Zone, territorial waters of Russia, territorial waters and inland sea waters of Russia (from Varangerfjord to Svjatoj Nos)		
Purpose:	Stock assessment of haddock, saithe, cod; collection of biological, genetic data on spawning cod. Testing of methods for assessment of juveniles of saithe and other demersal fishes in Murman fjords.		
Reported to:	PINRO survey report for internal use; ICES AFWG in 2007 ***survey will be conducted by the Russian party if additional catch volumes for scientific research are allocated from its national quotas***		

Nation:	Russian	Survey title:	Cod, haddock and saithe
Organisation:	PINRO		
Time period:	01.08-30.09	Vessel:	1 trawler
Target species:	Haddock, saithe, cod	Secondary species:	Catfishes, flatfishes, lump-sucker.
Area:	"Grey zone", Exclusive Economic Zone, territorial waters of Russia, territorial waters and inland sea waters of Russia (from Varangerfjord to Svjatoj Nos)		
Purpose:	Testing of methods for assessment of juveniles of saithe and other demersal fishes in Murman fjords.		
Reported to:	PINRO survey report for internal use; ICES AFWG in 2007 ***survey will be conducted by the Russian party if additional catch volumes for scientific research are allocated from its national quotas***		
Nation:	Russian	Survey title:	International survey for herring in the Barents and Norwegian Seas
Organisation:	PINRO		
Time period:	01.06-31.07	Vessel:	1 trawler

Target species:	Herring, mackerel	Secondary species:	Other pelagic species
Area:	The Norwegian and Barents Seas, Exclusive Economic Zone of Russia, “Grey zone”, and territorial waters and inland sea waters of Russia.		
Purpose:	Acoustic survey for the stock		
Reported to:	PINRO survey report for internal use; ICES WG NPBW in 2006; ICES WG on Planning of Ecosystem Pelagic Surveys in Northeast Atlantic in 2006 ***survey will be conducted by the Russian party if additional catch volumes for scientific research are allocated from its national quotas***		

Nation:	Russian	Survey title:	Greenland halibut, CPUE
Organisation:	PINRO		
Time period:	01.07-30.09 01.10-30.12	Vessel:	2 trawlers 2 trawlers
Target species:	Greenland halibut	Secondary species:	Cod, haddock, catfishes, redfish
Area:	Exclusive Economic Zone of Norway between 70°00’-73°30’N		
Purpose:	Investigation into the stock status, year-to-year dynamics of catch per unit effort, comparative fishing efficiency “long-line – trawl”, mass tagging. Estimation of density of Greenland halibut distribution under natural conditions with the use of video-acoustic complexes.		
Reported to:	PINRO survey report for internal use; ICES AFWG in 2007		

Nation:	Russian	Survey title:	Greenland halibut, CPUE
Organisation:	PINRO		
Time period:	01.07-30.09 01.10-30.12	Vessel:	2 trawlers 2 trawlers
Target species:	Greenland halibut	Secondary species:	Cod, haddock, catfishes, redfish
Area:	Area adjacent to Spitsbergen between 73°30’ – 78°00’N		
Purpose:	Investigation into the stock status, year-to-year dynamics of catch per unit effort, comparative fishing efficiency “long-line – trawl”, mass tagging. Estimation of density of Greenland halibut distribution under natural conditions with the use of video-acoustic complexes.		
Reported to:	PINRO survey report for internal use; ICES AFWG in 2007		

Nation:	Russian	Survey title:	Greenland halibut, CPUE
Organisation:	PINRO		
Time period:	01.07-30.09	Vessel:	1 trawler
Target species:	Greenland halibut	Secondary species:	Catfish, plaice, long rough dab, saithe, redfish
Area:	Exclusive Economic Zone of Russia and “Grey zone”		
Purpose:	Investigation into the stock status, catch per unit effort for the stock assessment, tagging.		
Reported to:	PINRO survey report for internal use; ICES AFWG in 2007		

Nation:	Russian	Survey title:	Greenland halibut, CPUE
Organisation:	PINRO		
Time period:	01.07-30.09 01.10-30.12	Vessel:	1 long-liner 1 long-liner

Target species:	Greenland halibut	Secondary species:	Cod, catfishes, redfish, tusk, skates
Area:	Exclusive Economic Zone of Norway and area adjacent to Spitsbergen between 70°00' – 78°00'N		
Purpose:	Investigation into the stock status, year-to-year dynamics of catch per unit effort, comparative fishing efficiency "long-line – trawl"		
Reported to:	PINRO survey report for internal use; ICES AFWG in 2007		

Nation:	Russian	Survey title:	Cod, haddock, CPUE
Organisation:	PINRO		
Time period:	01.07-30.09 01.10-31.12	Vessel:	1 long-liner 1 long-liner
Target species:	Cod, haddock	Secondary species:	Catfish, skates, tusk
Area:	Exclusive Economic Zone of Russia and "Grey zone"		
Purpose:	Study of fish resources for long-line fishery, morphophysiological characteristics and structure of concentrations		
Reported to:	PINRO survey report for internal use; ICES AFWG in 2007		

Nation:	Russian	Survey title:	Cod, haddock, CPUE
Organisation:	PINRO		
Time period:	01.07-30.09 01.10-31.12	Vessel:	1 long-liner 1 long-liner
Target species:	Cod, haddock	Secondary species:	Catfishes, skates, tusk
Area:	Exclusive Economic Zone of Norway and area adjacent to Spitsbergen between 70°00'-78°00'N		
Purpose:	Study of resources for long-line fishery, morphophysiological characteristics and structure of concentrations		
Reported to:	PINRO survey report for internal use; ICES AFWG in 2007		

Nation:	Russian	Survey title:	Cod, haddock
Organisation:	PINRO		
Time period:	01.07-30.09	Vessel:	5 trawlers
Target species:	Cod, haddock	Secondary species:	Catfish, long rough dab, saithe, redfish, Greenland halibut
Area:	Exclusive Economic Zone of Norway, "Grey zone", "Loophole" area and area adjacent to Spitsbergen		
Purpose:	Collection of data on distribution, abundance, morphological and biological status during feeding, study of trophic links "predator – prey", the effect of hydrometeorological conditions on fish behaviour		
Reported to:	PINRO survey report for internal use; ICES AFWG in 2007		

Nation:	Russian	Survey title:	Cod, haddock
Organisation:	PINRO		
Time period:	03.07-03.10	Vessel:	5 trawlers
Target species:	Cod, haddock	Secondary species:	Catfish, plaice, long rough dab, saithe, redfish
Area:	Exclusive Economic Zone of Russia and "Grey zone", inland sea waters and territorial waters of the Russian Federation		

Purpose:	Collection of data on distribution and biological status during feeding, study of trophic links "predator – prey", morphological and physiological characteristics, cod tagging
Reported to:	PINRO survey report for internal use; ICES AFWG in 2007

Nation:	Russian	Survey title:	Cod, haddock
Organisation:	PINRO		
Time period:	01.08-31.08	Vessel:	1 trawler
Target species:	Cod	Secondary species:	Other demersal fishes
Area:	Inland sea waters and territorial waters of the Russian Federation: Coastal areas from Varangerfjord to Svjatoj Nos		
Purpose:	Collection of data on distribution and biological status during feeding, study of trophic links "predator – prey", morphological and physiological characteristics, cod tagging		
Reported to:	PINRO survey report for internal use; ICES AFWG in 2007 ***survey will be conducted by the Russian party if additional catch volumes for scientific research are allocated from its national quotas***		

Nation:	Russian	Survey title:	Shrimp and demersal fishes
Organisation:	PINRO		
Time period:	01.08-31.08	Vessel:	1 trawler
Target species:	Shrimp and demersal fishes	Secondary species:	
Area:	Area adjacent to Spitsbergen		
Purpose:	Assessment of shrimp abundance and distribution. Quantitative estimation of by-catches of gadoids.		
Reported to:	PINRO survey report for internal use; Joint ICES/NAFO WG on shrimp in 2006 ***survey will be conducted by the Russian party if additional catch volumes for scientific research are allocated from its national quotas***		

Nation:	Russian	Survey title:	Distribution and migration of feeding concentrations of herring
Organisation:	PINRO		
Time period:	01.08-30.09	Vessel:	1 trawler
Target species:	Herring	Secondary species:	Blue whiting, mackerel
Area:	The Barents and Norwegian Seas		
Purpose:	Mapping of distribution of herring feeding concentrations		
Reported to:	PINRO survey report for internal use; ICES WGNPBW in 2006 ***survey will be conducted by the Russian party if additional catch volumes for scientific research are allocated from its national quotas***		

Nation:	Russian	Survey title:	Cod, haddock
Organisation:	PINRO, VNIRO		
Time period:	30.09-30.12	Vessel:	5 trawlers
Target species:	Cod, haddock	Secondary species:	Catfish, plaice, long rough dab, saithe, redfish
Area:	Exclusive Economic Zone of Russia and "Grey zone", inland sea waters and territorial waters of the Russian Federation		
Purpose:	Collection of data on distribution and biological status during wintering and feeding		

	migrations, study of trophic links “predator – prey”, intra-species structure with the use of genetic methods
Reported to:	PINRO survey report for internal use; ICES AFWG in 2007

Nation:	Russian	Survey title:	Cod, haddock
Organisation:	PINRO		
Time period:	01.10-31.12	Vessel:	5 trawlers
Target species:	Cod, haddock	Secondary species:	Catfish, long rough dab, saithe, redfish, Greenland halibut
Area:	Exclusive Economic Zone of Norway, “Grey zone”, “Loophole” area and area adjacent to Spitsbergen		
Purpose:	Collection of data on distribution and biological status during wintering and spawning migrations, study of trophic links “predator – prey”. Evaluation of individual readiness for wintering and spawning.		
Reported to:	PINRO survey report for internal use; ICES AFWG in 2007		

Nation:	Russian	Survey title:	Multispecies survey for demersal fishes
Organisation:	PINRO		
Time period:	15.10-30.12 15.10-30.12	Vessel:	1 trawler 1 trawler
Target species:	Cod, haddock, Greenland halibut	Secondary species:	Catfishes, redfish, long rough dab, plaice, saithe, grenadier
Area:	Exclusive Economic Zone of Norway, Exclusive Economic Zone of Russia and area adjacent to Spitsbergen, inland sea waters and territorial waters of the Russian Federation		
Purpose:	Stock assessment of cod, haddock, Greenland halibut and other demersal fishes; study of “predator-prey” relationships; oceanography		
Reported to:	PINRO survey report for internal use; ICES AFWG in 2007		

Nation:	Russian	Survey title:	Complex aerial surveys within the research on distribution and biomass assessment of feeding mackerel
Organisation:	PINRO		
Time period:	01.06-31.08	Aircraft: Vessel:	Airborne laboratory AN-26 “Arktika” 1 research vessel
Target species:	Mackerel	Secondary species:	Herring, juvenile blue whiting, marine mammals, seabirds, chlorophyll, zooplankton, oceanographic parameters at the sea surface
Area:	The Norwegian Sea		
Purpose:	Distribution and approaches to assess biomass of feeding mackerel; abundance, distribution and species composition of marine mammals and seabirds; environmental parameters at the sea surface including identification of areas with high biological productivity		
Reported to:	PINRO survey report for internal use; ICES AFWG in 2006 ***survey will be conducted by the Russian party if additional catch volumes for scientific research are allocated from its national quotas***		

Nation:	Russian	Survey title:	Distribution of fishable concentrations of capelin
Organisation:	PINRO		
Time period:	01.11-31.12	Vessel:	1 trawler

Target species:	Capelin	Secondary species:	Polar cod
Area:	Exclusive Economic Zone of Norway, Exclusive Economic Zone of Russia and area adjacent to Spitsbergen		
Purpose:	Distribution of capelin fishable concentrations. Study of migration routes and rates and conditions of formation of concentrations in dependence on biological status of the object and abiotic environmental factors. Oceanography.		
Reported to:	PINRO survey report for internal use; ICES AFWG in 2007 ***survey will be conducted by the Russian party if additional catch volumes for scientific research are allocated from its national quotas***		

Joint investigations

Nation:	Norway/Russia	Survey title:	Joint Winter Survey
Organisation:	PINRO/IMR		
Time period:	11.02 – 09.03 10.02 – 15.03 February (14 days) 01.01-28.02 01.01-31.03 01.02-31.03	Vessel:	R/V G.O. Sars R/V Johan Hjort Chartered Norwegian vessel(s) 1 Russian trawler 1 Russian trawler 1 Russian trawler
Target species:	Cod, Haddock, capelin, herring	Secondary species:	Redfish *Sebastes mentella, S. marinus*, Greenland halibut, catfishes
Area:	Exclusive Economic Zone of Russia and Exclusive Economic Zone of Norway, inland sea waters and territorial waters of the Russian Federation		
Purpose:	Distribution and stock assessment, collection of biological samples. Multi-species interactions with focus on cod diet, oceanography and plankton		
Reported to:	Joint IMR/PINRO Report Series and ICES AFWG in 2006 ***Russian vessels will participate in the survey if additional catch volumes for scientific research are allocated from national quotas***		

Nation:	Norway/Russia	Survey title:	Survey of blue whiting spawning areas
Organisation:	PINRO/IMR		
Time period:	15.03 – 17.04 01.03-31.05	Vessel:	R/V G.O. Sars 1 Russian trawler
Target species:	Cod, Haddock, capelin, herring	Secondary species:	Other pelagic fishes
Area:	To the west of British Islands		
Purpose:	Estimation of abundance and distribution of spawning blue whiting, oceanography, plankton, survey of haddock on the Rockall Bank, argentine on the Outer-Bailey Bank and Bill Bailies Bank, methods for acoustic survey		
Reported to:	Joint IMR/PINRO survey report for internal use; ICES WGNPBW in 2006		

Nation:	Norway/Russia	Survey title:	Joint survey of capelin larvae and herring juveniles
Organisation:	PINRO/IMR		
Time period:	23.05 – 14.06 15.05 – 30.05	Vessel:	R/V Johan Hjort 1 Russian trawler
Target species:	Capelin, herring	Secondary species:	Blue whiting
Area:	Norwegian coastal waters, Southern Barents Sea (including NEZ and REZ), inland sea waters and territorial waters of the Russian Federation.		

Purpose:	Abundance and distribution of capelin larvae and herring juveniles, oceanography, plankton
Reported to:	Joint IMR/PINRO Report Series; ICES WGNPBW in 2006 ***Russian vessels will participate in the survey if additional catch volumes for scientific research are allocated from national quotas***

Nation:	Norway/Russia	Survey title:	Joint survey for feeding mackerel in the Norwegian Sea
Organisation:	PINRO/IMR		
Time period:	15.07-06.08 01.06-31.08	Vessel:	3 vessels chartered by IMR 1 Russian trawler 1-2 vessels with PINRO observers Airborne laboratory AN-26, "Arktika"
Target species:	mackerel	Secondary species:	Other pelagic fishes, marine mammals, seabirds, chlorophyll, zooplankton,
Area:	The Norwegian Sea		
Purpose:	Distribution and approaches to assess biomass of feeding mackerel; abundance, distribution and species composition of marine mammals and seabirds; a complex of oceanographic and hydrobiological data, joint experimental and calibration works.		
Reported to:	Survey report for IMR and PINRO; ICES WG; NEAFC meeting ***Russian vessels will participate in the survey if additional catch volumes for scientific research are allocated from national quotas***		

Nation:	Norway/Russia	Survey title:	Joint ecosystem survey, autumn
Organisation:	PINRO/IMR		
Time period:	16.08 – 31.09 12.08 – 31.09 to be decided 01.08-31.10 01.08-31.10	Vessel:	R/V "G.O Sars" R/V "Johan Hjort" R/V "Jan Mayen" 1 Russian trawler 1 Russian trawler
Target species:	Greenland halibut, redfishes, shrimp, herring, capelin, 0-group of different species	Secondary species:	Other pelagic and demersal species, benthic organisms, sea mammals and birds
Area:	The Norwegian Sea, Exclusive Economic Zone of Russia, "Grey zone", Exclusive Economic Zone of Norway, Loophole" area and area adjacent to Spitsbergen and territorial waters of the Russian Federation		
Purpose:	Abundance and distribution of Greenland halibut (including juveniles north and east of Spitsbergen), redfish *Sebastes mentella, Sebastes marinus,* shrimp, herring, capelin, polar cod, 0-group of different species. Oceanography, plankton, marine mammals, seabirds, species interactions, sampling for determining pollution levels.		
Reported to:	Joint IMR/PINRO Report Series; ICES WGNPBW in 2007; ACFM in autumn 2006 ***Russian vessels will participate in the survey if additional catch volumes for scientific research are allocated from national quotas***		

Nation:	Norway/Russia	Survey title:	Complex aerial surveys within the frames of annual Russian-Norwegian research on 0-group and pelagic fishes.
Organisation:	PINRO/IMR		
Time period:	01.08-31.10	Aircraft:	Airborne laboratory AN-26 "Arktika"
Target	Capelin, polar cod	Secondary	Marine mammals, seabirds, chlorophyll,

species:	species: zooplankton
Area:	Exclusive Economic Zone of Russia, "Grey zone", Exclusive Economic Zone of Norway, Loophole" area and area adjacent to Spitsbergen
Purpose:	Investigation of distribution of capelin and polar cod, marine mammals and seabirds; estimation of oceanographic parameters at the sea surface; localization of areas of high biological productivity
Reported to:	Survey report for internal use; joint IMR/PINRO Report Series ***Russian vessels will participate in the survey if additional catch volumes for scientific research are allocated from national quotas***

3. Research program on Greenland Halibut

The parties discussed and approved the Report on the 3-year (2002-2004) joint Russian-Norwegian programme on research into Greenland halibut.

During the 3-year programme of joint Russian-Norwegian investigations the scientists have collected and analysed large amount of biological data on Greenland halibut applying both traditional and new methods (underwater video, DST-tags, genetic investigations, "vertical" long-lines for research on distribution in the water column etc.).

Achieved results significantly increased our knowledge on distribution, biology, halibut behaviour at different stages of life cycle and stock dynamics.

At the same time, in the work to undertake the given tasks the new challenges that still need to be met were revealed. In particular, the true accuracy of ageing, biological differences between males and females etc. are among them and stock assessment with traditional mathematic methods used in ICES explicitly depends on these issues.

Taking into account the importance the accuracy of Greenland halibut stock estimation for deciding on rational exploitation of this species, there is a need to continue investigations in the framework of new joint programme on improvement of methods for assessment of Greenland halibut stock and development of optimal long-term strategy for harvesting of this stock. The new programmes may include the following studies:

- improve the methods of ageing;
- improve methods of survey and aggregation of data from different surveys;
- make quantitative estimation of Greenland halibut stock who distribute in pelagic layers;
- investigate sexual dimorphism and effect of fisheries on population structure;
- improve methods of stock assessment;
- develop optimal long-term harvesting strategy.

To collect data for the issues above both parties will conduct research within the frames of the joint project and in accordance with national programs.

4. Red king crab (*Paralithodes camtschaticus*)

During investigations in the frames of 3-year joint Russian-Norwegian research programme the estimates of stock status, structure and dynamics were carried out as well as different activities to research interactions between introduced species and native fauna were started and methods for investigation and management of the crab harvesting were improved. The results of investigations according to the joint research programme 2002-2004 were discussed at the workshop that was held in Tromsø 20-22 of June 2005. The report on results of this workshop was presented at the 34th session of the Commission in 2005.

However, not all tasks given in the first 3-year programme were met. Therefore, at the 33rd session of the Commission the Parties agreed to initiate a new 3-year research programme on red king crab. The program will focus on the following items:

- Investigate the effects of the red king crab on native fauna;
- improvement of methods for the estimation of size and structure of the stock;
- investigation of the crab environment and its preferable environmental conditions;
- methods for reducing by-catches in other fisheries;
- suggest proposals for management measures for the crab stocks.

Norwegian investigations

Nation:	Norway	Survey title:	Red king crab survey
Organisation:	IMR		
Time period:	15.08 – 03.09	Vessel:	R/V "Johan Ruud"
Target species:	Red king crab	Secondary species:	
Area:	Fjords in Finnmark		
Purpose:	Abundance estimation and ecological investigations		
Reported to:	Internal IMR survey report. PINRO		

Nation:	Norway	Survey title:	Behaviour of king crab in trawl
Organisation:	IMR		
Time period:	02.05 – 15.05	Vessel:	Hired vessel
Target species:	Red king crab	Secondary species:	
Area:	Finnmark		
Purpose:	Behaviour of king crab in trawl		
Reported to:	Internal IMR survey report		

Nation:	Norway	Survey title:	Red king crab survey
Organisation:	IMR		
Time period:	10 days in October	Vessel:	R/V "Johan Hjort"
Target species:	Red king crab	Secondary species:	
Area:	Off the coast of Finnmark		
Purpose:	Abundance estimation and ecological investigations		
Reported to:	Internal IMR survey report. PINRO		

Nation:	Norway	Survey title:	Red king crab trial fishing
Organisation:	IMR		
Time period:	15.09 – 31.12	Vessel:	Hired vessels
Target species:	Red king crab	Secondary species:	
Area:	Fjords in Finnmark		
Purpose:	Methodological investigations		
Reported to:	Internal IMR survey report. PINRO		

Russian investigations:

Nation:	Russia	Survey	Red king crab trawl survey

		title:	
Organisation:	PINRO		
Time period:	01.04-31.05	Vessel:	1 trawler
Target species:	Red king crab	Secondary species:	
Area:	Exclusive Economic Zone, inland sea waters and territorial waters of the Russian Federation		
Purpose:	Study of Red king crab during spawning. Larvae, juveniles, tagging, benthos		
Reported to:	Internal PINRO report. IMR		

Nation:	Russia	Survey title:	Red king crab trawl survey
Organisation:	PINRO		
Time period:	01.08-30.09	Vessel:	1 trawler
Target species:	Red king crab	Secondary species:	
Area:	Exclusive Economic Zone, inland sea waters and territorial waters of the Russian Federation		
Purpose:	Study of Red king crab during spawning. Larvae, juveniles, tagging, benthos		
Reported to:	Internal PINRO report. IMR		

Nation:	Russia	Survey title:	Red king crab trawl survey
Organisation:	VNIRO		
Time period:	01.09-31.10	Vessel:	2 vessels
Target species:	Red king crab	Secondary species:	
Area:	Exclusive Economic Zone, inland sea waters and territorial waters of the Russian Federation		
Purpose:	Study of Red king crab. Stock assessment. Trap survey.		
Reported to:	Internal VNIRO report, PINRO, IMR		

Nation:	Russia	Survey title:	Testing of autonomous underwater video-computer recorder
Organisation:	PINRO, VNIRO		
Time period:	01.01-31.12	Vessel:	1 vessel
Target species:	Red king crab	Secondary species:	Other demersal fish species
Area:	The Barents Sea		
Purpose:	The use of autonomous underwater video-computer recorder to conduct underwater video filming of demersal fishes and crustaceans with registration of video filming in the computer for further analysis according to the joint project in 2006-2009.		
Reported to:	Internal PINRO report. VNIRO. IMR		

Nation:	Russia	Survey title:	Red king crab
Organisation:	PINRO		
Time period:	01.08-30.09	Vessel:	1 trawler
Target species:	Red king crab	Secondary species:	Cod, haddock and other demersal fish species
Area:	Exclusive Economic Zone, inland sea waters and territorial waters of the Russian Federation		
Purpose:	Investigation of means for minimisation of red king crab by-catches un fisheries for cod and haddock. Recommendation on improvement of other trawls design		

Reported to:	Internal PINRO report.

Nation:	Russia	Survey title:	SCUBA-diving survey of red king crab
Organisation:	PINRO, VNIRO		
Time period:	01.03-30.04 01.07-31.08 01.09-31.10	Vessel:	2 vessels SCUBA-divers
Target species:	Red king crab	Secondary species:	
Area:	Inland sea waters and territorial waters of the Russian Federation		
Purpose:	Assessment of red king crab stock in the area of SCUBA-diving survey		
Reported to:	Internal PINRO, VNIRO report.		

Nation:	Russia	Survey title:	Aquaculture of red king crab
Organisation:	PINRO, VNIRO		
Time period:	01.01-15.12	Vessel:	2 vessels
Target species:	Red king crab	Secondary species:	
Area:	Exclusive Economic Zone, inland sea waters and territorial waters of the Russian Federation		
Purpose:	Collection of material for experimental works on the crab males rearing until optimal filling of the legs. Development of biotechniques for aquaculture of red king crab		
Reported to:	Internal PINRO report. IMR		

Nation:	Russia	Survey title:	Collection of biological and fisheries data on red king crab
Organisation:	PINRO		
Time period:	01.01 – 28.02 01.09 – 31.12	Vessel:	10 vessels 10 vessels
Target species:	Red king crab	Secondary species:	
Area:	Exclusive Economic Zone, inland sea waters and territorial waters of the Russian Federation		
Purpose:	Collection of data on catch per unit effort, study of biology, abundance dynamics, migration, feeding, trophic links with local species and distribution of the crab		
Reported to:	Internal PINRO report. VNIRO. IMR		

Nation:	Russia	Survey title:	Benthos survey
Organisation:	PINRO		
Time period:	June – August	Vessel:	1 trawler
Target species:	Macrozoobenthos	Secondary species:	Macrozoobenthos
Area:	Exclusive Economic Zone, inland sea waters and territorial waters of the Russian Federation		
Purpose:	The Barents Sea including NEZ and REZ, Spitsbergen area, inland sea waters and territorial waters of the Russian Federation		
Reported to:	Internal PINRO report. IMR		

5. Fishing technology and selectivity of fishing gears

Research activity in these fields is carried out with the aim to develop:

- fishing gears that are more species and size selective and that have less negative impact on fish that escape the gear, and have less negative ecosystem effects in general.
- Improved survey gears and methodology

Norwegian investigations:

Nation:	Norway	Survey title:	Selection shrimp trawl
Organisation:	IMR		
Time period:	23.05 – 30.05	Vessel:	Hired vessel
Target species:	Shrimp	Secondary species:	Groundfish species
Area:	Barents sea		
Purpose:	Selective properties of shrimp trawl		
Reported to:	Internal IMR survey report		

Nation:	Norway	Survey title:	Self-spreading bottom trawl gear
Organisation:	IMR		
Time period:	08.05 – 16.05	Vessel:	Hired Vessel
Target species:	Demersal species	Secondary species:	
Area:	Finnmark coast		
Purpose:	Bottom trawl technology development		
Reported to:	Internal IMR survey report		

Nation:	Norway	Survey title:	Trawl methodology
Organisation:	IMR		
Time period:	27.02 – 19.03	Vessel:	Hired vessel
Target species:		Secondary species:	
Area:	Barents Sea		
Purpose:	Changes in trawl efficiency		
Reported to:	Internal IMR survey report		

Nation:	Norway	Survey title:	Trawl calibration
Organisation:	IMR		
Time period:	31.01 – 10.02	Vessel:	r/v G.O.Sars r/v Johan Hjort
Target species:		Secondary species:	
Area:	Barents Sea		
Purpose:	Calibration of survey trawl		
Reported to:	Internal IMR survey report		

Russian investigations:

Nation:	Russia	Survey title:	Selectivity of trawl and long-liner

Organisation:	PINRO		
Time period:	01.05-30.11	Vessel:	1 long-liner 1 trawler
Target species:	Greenland halibut	Secondary species:	Other demersal fish species
Area:	Exclusive Economic Zone of Norway and area adjacent to Spitsbergen		
Purpose:	Comparative fishing “trawl - long-liner”		
Reported to:	Internal IMR survey report; ICES AFWG in 2007		

Nation:	Russia	Survey title:	Selectivity of trawl
Organisation:	PINRO		
Time period:	01.05-30.06 01.07-31.12	Vessel:	1 trawler 1 trawler
Target species:	Cod, haddock, Greenland halibut	Secondary species:	Other demersal fishes
Area:	Exclusive Economic Zone of Russia		
Purpose:	Elaboration and grounds for the use of current and new regulatory measures in the trawl fishery for demersal fish species. Evaluation of the results of their application.		
Reported to:	PINRO survey report for internal use.		

Nation:	Russia	Survey title:	Selectivity of trawl
Organisation:	PINRO		
Time period:	01.03-30.06 01.07-31.12	Vessel:	2 trawlers
Target species:	Cod, haddock, Greenland halibut	Secondary species:	Other demersal fishes
Area:	The Barents Sea, Spitsbergen		
Purpose:	Elaboration and grounds for the use of current and new regulatory measures in the trawl fishery for demersal fish species. Evaluation of the results of their application.		
Reported to:	PINRO survey report for internal use. ***survey will be conducted by the Russian party if additional catch volumes for scientific research are allocated from its national quota***		

6. Optimal harvesting of commercial species in the Barents Sea ecosystem

The project will be carried out according to the mandate from the Joint Norwegian-Russian Fisheries Commission. Details of the work are given in the report from the Basic Document Working Group. The work involves several projects and researchers that may work independently of each other. In many cases, the same data will be used in different sub-projects. In the end, the different sub-projects will be synthesized to give an overall picture of the ecosystem and what we might expect of the long-term yield from each stock taking into account its interaction with other stocks and with the environment. The work plan consists of two steps:

- In step 1 (2005 - 2007) the possible long-term yield of cod will be evaluated using existing data and models
- In step 2 (2008 - 2014) the long-term yield of the main commercial species will be evaluated taking into account species interdependence using a joint multispecies model

7. Monitoring of pollution levels in the Barents Sea

PINRO and IMR will continue to monitor pollution levels in accordance with national programmes. Scientists from both institutes plan to discuss and exchange results from investigations during the meeting of scientists in March 2006.

The investigations of both countries are based on material collected during the surveys in the Barents Sea (see chapter 2 of this appendix).

8. Research program of the stock structure of Northeast arctic cod

Research were conducted in this research program during the period 2002-2004. This included field works, genetic analysis and exchange of personnel and collected samples.

The research program on stock structure should continue in 2006 in order to reach a general agreement on the interpretations of the results obtained from the research program. Discussion on this should take place during the joint IMR/PINRO March meeting and a joint report should be submitted to the 35th session of the Joint Russian/Norwegian Fisheries Commission in 2006.

9. Investigations on age and growth of fish

The Parties will continue the cooperation on establishing an international historic database on growth in length and weight of fish as well as catch statistics archived at PINRO and IMR. The exchange of age reading specialists and material will continue in 2006 according to the established routines. Meeting between specialists in age reading of cod, haddock, Greenland halibut will meet in Murmansk in summer 2006. Exact timing of the meeting will be decided by correspondence.

10. Marine mammals

The effect of marine mammals, including the White Sea population of harp seals, on biological resources of the Barents and Norwegian Seas is considerable. Besides, harp, hooded and grey seals and minke whales are hunted. There is, therefore a need for joint research on marine mammals, including boat based as well as airborne surveys. The joint Russian-Norwegian research should be aimed at assessments of distribution and abundance of the most important species, and their trophic linkages with other resources.

Norwegian activities in 2006 include sampling of biological material from harp seals during commercial sealing in the southeastern Barents Sea. Abundance estimation surveys of grey seals will also be conducted at the Norwegian coast. Furthermore, studies of biology and ecology of harp seals in open waters of the Barents Sea during summer. Monitoring of minke whale diet will be conducted in the REZ part of the Barents Sea if permitted by Russian authorities. Surveys to estimate abundance of minke whale will be carried out in the eastern Barents Sea, whereas satellite tags will be deployed on Minke whales in the Barents Sea.

In 2006, the Russian Party will continue annual multispectral aerial surveys of harp seals of the White Sea population on their whelping and moulting grounds as well as during their feeding migrations, using the Russian airborne laboratory AN-26 “Arktika”. Besides, complex airborne surveys are planned during investigations of white whale as well as joint surveys on the ecology of minke whales and other whales and seals.

Telemetric investigations of harp seals will be carried out in the White Sea in a joint Norwegian-Russian project if funding is obtained. In another joint Norwegian-Russian project, various aspects of biology, ecology and behaviour of white whales will be studied in the White Sea and Barents Sea.

Norwegian investigations:

Nation:	Norway	Survey title:	Monitoring of biological parameters in harp seals

Organisation:	IMR		
Time period:	25.03 – 01.05	Vessel:	1 sealer
Target species:	Harp seal	Secondary species:	
Area:	Southeastern Barents Sea		
Purpose:	Collection of biological material from harp seals during commercial sealing		
Reported to:	ICES Harp- and Hooded seals WG, NAMMCO		

Nation:	Norway	Survey title:	Abundance estimation Grey seals
Organisation:	IMR		
Time period:	10.11-10.12	Vessel:	1 coast guard vessel
Target species:	Grey seals	Secondary species:	
Area:	Norwegian coast		
Purpose:	Abundance estimation Grey seals		
Reported to:	NAMMCO		

Nation:	Norway	Survey title:	Sighting survey Minke whale
Organisation:	IMR		
Time period:	26.06 – 06.08	Vessel:	2 coast guard vessels
Target species:	Minke whale	Secondary species:	
Area:	Eastern Barents Sea		
Purpose:	Sighting survey Minke whale		
Reported to:	IWC, NAMMCO		

Nation:	Norway	Survey title:	Telemetric tagging of Minke whales
Organisation:	IMR		
Time period:	28.08 – 17.09	Vessel:	1 coast guard vessel
Target species:	Minke whales	Secondary species:	
Area:	Barents Sea		
Purpose:	Telemetric tagging of Minke whales		
Reported to:	IWC, NAMMCO		

Joint investigations:

Nation:	Russia / Norway	Survey title:	Scientific whaling
Organisation:	PINRO, IMR		
Time period:	01.05-31.07	Vessel:	2 charted Norwegian whalers
Target species:	Minke whale	Secondary species:	
Area:	Murman coast, the Barents and White Seas including inland sea waters and territorial waters of the Russian Federation		
Purpose:	Study of biology and ecology of Minke whales.		
Reported to:	Survey report for internal use at IMR, PINRO; ICES, NAMMCO, IWC		

Nation:	Russia/Norway	Survey title:	Harp seal survey
Organisation:	PINRO, IMR		

Time period:	01.06-30.06	Vessel:	one Russian vessel, R/v Jan Mayen
Target species:	Harp seal	Secondary species:	
Area:	The Barents and White Seas including inland sea waters and territorial waters of the Russian Federation		
Purpose:	Ecological studies of harp seals		
Reported to:	Survey report for internal use at IMR; PINRO; ICES, NAMMCO		

Nation:	Russia/Norway	Survey title:	Marine mammals survey
Organisation:	PINRO, IMR		
Time period:	01.08-30.10	Vessel:	2 research vessels from Norway, 2 research vessels from Russia, Airborne laboratory AN-26 "Arktika"
Target species:	Pelagic fishes, 0-group, marine mammals	Secondary species:	Seabirds, oceanographic and hydrobiological parameters at the sea surface, ice conditions
Area:	The Barents Sea		
Purpose:	Investigation of the effect of marine mammals and seabirds as well as oceanographic conditions including ice conditions on the main commercial fish species		
Reported to:	Survey report for internal use at IMR and PINRO; Joint Russian-Norwegian Fisheries Commission ***Russian vessels will participate in the survey if additional catch volumes for scientific research are allocated from national quotas***		

Nation:	Russia/Norway	Survey title:	Harp seal tagging in the White Sea
Organisation:	PINRO, IMR		
Time period:	01.04-31.05	Vessel:	1 helicopter
Target species:	Harp seal	Secondary species:	
Area:	The White Sea coast		
Purpose:	Study of the harp seal biology and ecology, using satellite telemetry		
Reported to:	Survey report for internal use at IMR, PINRO; ICES; ***Russian vessels will participate in the survey if additional catch volumes for scientific research are allocated from national quotas***		

Russian investigations:

Nation:	Russia	Survey title:	Multispectral aerial survey of whelping moulting grounds of harp seal in the White Sea
Organisation:	PINRO		
Time period:	01.03-30.04	Vessel:	Airborne laboratory AN-26 "Arktika"
Target species:	Harp seal	Secondary species:	White whale and other species
Area:	The White Sea		
Purpose:	Estimation of abundance and distribution of seals on whelping and moulting grounds		
Reported to:	Survey report for internal use at IMR, PINRO; ICES; NAMMCO, IWC ***survey will be conducted by the Russian party if additional catch volumes for scientific research are allocated from its national quotas***		

Nation:	Russia	Survey title:	Investigation of reproduction biology and ecology of harp seal in the Barents Sea
Organisation:	PINRO		
Time period:	01.02-31.03	Vessel:	Coastal hunting
Target species:	Harp seal	Secondary species:	
Area:	The White Sea		
Purpose:	Investigation of biology and ecology of harp seal		
Reported to:	Survey report for internal use at IMR, PINRO; ICES; NAMMCO, IWC		

Nation:	Russia	Survey title:	Multispectral aerial survey of distribution and abundance estimation of white whale and other marine mammals
Organisation:	PINRO		
Time period:	01.06-31.08	Vessel:	Airborne laboratory AN-26 "Arktika"
Target species:	White whale, minke whale	Secondary species:	Harp seal, dolphins
Area:	The Barents and White Seas		
Purpose:	Estimation of abundance and distribution of marine mammals in the Barents and White Sea		
Reported to:	Survey report for internal use at IMR, PINRO; ICES; NAMMCO, IWC ***survey will be conducted by the Russian party if additional catch volumes for scientific research are allocated from its national quotas***		

Nation:	Russia	Survey title:	Biological samples, tagging and visual observations on the populations of marine mammals
Organisation:	PINRO,		
Time period:	01.03-31.08	Vessel:	Coastal expeditions (boats and coastal hunting)
Target species:	Harp seal, ringed seal, white whale	Secondary species:	Bearded seal, walrus, grey seal and bay seal
Area:	Coast of the Barents and White Seas		
Purpose:	Investigations of abundance, feeding, distribution, sex and age composition of marine mammals in the coastal area of the Barents and White Seas		
Reported to:	Survey report for internal use at IMR, PINRO,; ICES; NAMMCO, IWC		

Nation:	Russia	Survey title:	Capture of alive white whale (for tagging)
Organisation:	PINRO		
Time period:	01.06-31.07	Vessel:	Coastal expedition
Target species:	White whale	Secondary species:	Bearded seal, walrus, grey seal and bay seal
Area:	the White Seas coast		
Purpose:	Investigations of biology and ecology of white whale.		
Reported to:	Survey report for internal use at IMR, PINRO, ICES; NAMMCO, IWC		

11. Investigations on survey methodology

In 2006, investigations in the field of survey methods and comparison of techniques and standard methods will continue. A workshop on survey methodology will take place in Bergen in August 2006.

12. Russian-Norwegian Fisheries Science Symposia

The 11th Russian-Norwegian Fisheries Science Symposium "Ecosystem Dynamics and Optimal Long Term Harvest in the Barents Sea Fisheries" was held 15-17 of August 2005 in Murmansk, Russia. The issues discussed at the symposium reflect the tendencies of modern development of fisheries science. The need for ecosystem approach to the exploitation management of marine bioresources is getting universal understanding. For the Barents Sea it is especially important since this region is in the zone of active interaction between water masses of different origin, which leads to high dynamic nature of ecosystem under conditions of climate variations.

More than 50 representatives from science, industry and management bodies from both countries as well as Chair of the ACFM (ICES) Dr. Poul Degnbol participated in the Symposium.

At the three consecutive Theme Sessions of the Symposium: "Dynamics of the Barents Sea ecosystem", "Optimal long-term management strategies of commercial stocks in the Barents Sea" and "Retrospective analyses of assessments and management advice for the Barents Sea fish stocks" during two days Russian and Norwegian specialists made and discussed 20 oral presentations and 12 posters, most of which were prepared jointly by Russian and Norwegian scientists.

The results of discussions showed that concept of ecosystem approach to harvest management needs a further development, and so far, there is no explicit advice on the practical implementation of this concept in management of harvesting in the Barents Sea.

At the same time, there is a common understanding of the approach to solve a number of problems. First of all, it concerns basic principles for improvement of existing rules for management of bioresources in the Barents Sea based on ecosystem approach. Here we have to follow gradualness and successiveness of the decision making process. During discussions the participants have managed to achieve a common opinion that the objectives of harvest strategy should be set by managers of fishing industry and fishermen, while the role of researchers is primarily to provide advice on realisation of these objectives and analyse possible consequences of different management decisions.

The theme for the next symposium to be held in 2007 will be discussed at the meeting of scientists in March 2006.

13. Establishing conversion factors

During the meeting of the "Norwegian-Russian Permanent Committee for Management and Control Issues in the Fisheries Sector" in 2002-2003, joint Russian-Norwegian experimental and control investigations for estimation and comparison of data on conversion factors for haddock were conducted. The results of these investigations revealed that conversion factor that are applied for fish products from haddock are controversial. Probably, it is caused by that fact that applied conversion factor are outdated or they were calculated for other seasons and fishing areas, which means that there is a need to differentiate conversion factors by areas and seasons of fishing activities to provide fair control of the actual catch.

To establish true conversion factors for products from raw fish there is a need to carry out additional experimental and control investigations in fishing mode taking into account areas, fishing seasons, biological condition of fish and analysis of technological process of production.

Joint investigations:

Nation:	Norway/Russia	Survey title:	Haddock conversion factors
Organisation:	PINRO,		
Time period:	To be decided by	Vessel:	One trawler

	correspondence		
Primary species:	Haddock	Secondary species:	Other demersal species
Area:	To be decided by correspondence		
Purpose:	Establish conversion factors for haddock		
Reported to:	Permanent Committee, PINRO, IMR, Norwegian Directorate of Fisheries		

14. Joint 3-years program on benthic living animals

In order to strengthen the ecosystem approach in the management of the Barents Sea living marine resources, it is important to cooperate on and exchange knowledge on benthic living species in the Barents Sea.
A 3-year joint program between the two Parties is therefore established through the period 2006 – 2008.

The main goals for this program is to study and share knowledge on biodiversity in benthic fish and invertebrate communities, and to monitor long term changes that may be related to antropogenic or climatic effects.

Details about the research issues and execution of the program will be discussed and agreed upon at the scientist meeting between PINRO and IMR in March 2006.

15. Catch volumes needed for investigations of marine resources and monitoring of the most important commercial species, as well as management tasks

The catch volumes shall satisfy the need for solving all tasks described in "Joint Norwegian – Russian Scientific Research Program on Living Marine Resources in 2006" including surveillance activities to provide recommendations on area closures / reopening as well as other decisions on management of fishing activities on living marine resources in ICES Subarea I and II.

To solve these tasks the following catch quantities are decided for each party for 2006:

- 7 000 tonnes of Northeast Arctic cod
- 4 500 tonnes of Greenland halibut
- 4 000 tonnes of other groundfish species including by-catches

The Norwegian Party expressed its concern that both parties will be able to conduct the investigations outlined in the Joint Norwegian-Russian scientific research Program, and hope that both parties will be given the resources necessary to fulfil the objectives of the Program.

Both Parties will make all efforts to fulfil the Program completely.

All catches taken for research and management purposes should be recorded in the catch statistics separately.