Russia’s new cruise missiles: a game changer?

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Service historique de la défense

Russia’s first use of seaborne land attack cruise missiles

- On 7 October 2015, the Caspian Flotilla’s Gepard class frigate and three Buyan-M class corvettes, launched 26 Kalibr-NK cruise missiles (3M14T) at 11 targets in Syria. The missiles traveled 1,500 km (932 mi) through Iranian and Iraqi airspace and struck targets in the Idlib province (controlled by the Free Syrian Army and the Al Quaeda/Al Nusra front. The US claimed that 4 missiles had failed but no evidence was given and Iran denied. https://youtu.be/vPu_RL7Ncao
- On 20 November the Caspian flotilla launched 18 more missiles against Raqqa, Idlib and Aleppo.
- On 9 December, Russia fired 4 KALIBR-PL (3M14K) cruise missiles from the KILO submarine B-237 *Rostov-on-Don* in the Mediterranean.
- On 19 August 2016 two Black Sea corvettes deployed in the Mediterranean launched three Kalibr-NK cruise missiles against al-Nusra targets near Aleppo
- On 20 September Russian state media reported that Russian warships in the Mediterranean fired three Kalibr-NK missiles at western Aleppo, near Mount Simeon.

The KALIBR (Калибр) land-attack/anti-ship missile (SS-N-27B SIZZLER)

- 3M54K: anti-shipping submarine launched [length : 8.22 m (27.0 ft.), with a 200 kg (440 lb.) warhead; range: 440–660 km (270–410 mi); sea-skimmer with supersonic terminal speed (Mach 2.9) and a flight altitude of 4.6 meters (15 ft.)]
- 3M54T: anti-shipping ship launched (VLS); [length: 8.9 m (29 ft), with a 200 kg (440 lb.) warhead; range: 440–660 km (270–410 mi)]
- 3M14K: inertial guidance land attack submarine-launched [length: 6.2 m (20 ft), 450 kg (990 lb) warhead; range: 1,500–2,500 km (930–1,550 mi); subsonic terminal speed: Mach 0.8].
- 3M14T: Inertial guidance land attack ship launched (VLS) missile, thrust vectoring booster [length: 8.9 m (29 ft), its warhead weight and other performance are the same as the 3M14K. Russia fired 26 3M14T cruise missiles from four surface ships in the Caspian Sea against 11 targets in Syria on 7 October 2015.

The BUYAN MOD Sea-river corvettes, a true LCS

The intimidating “KALIBR diplomacy”: President Putin showing the new land-attack missile to his Azerbaijani counterpart Ilham Aliyev …who looked uneasy

- Baku, August 13th, 2013
- The Russian KALIBR fitted corvettes also visited the Iranian port of Bandar-E-Anzali in October 2014 to demonstrate their new capabilities

The meaning of the cruise missile strikes on Syria: the opinion of a Russian presidential adviser

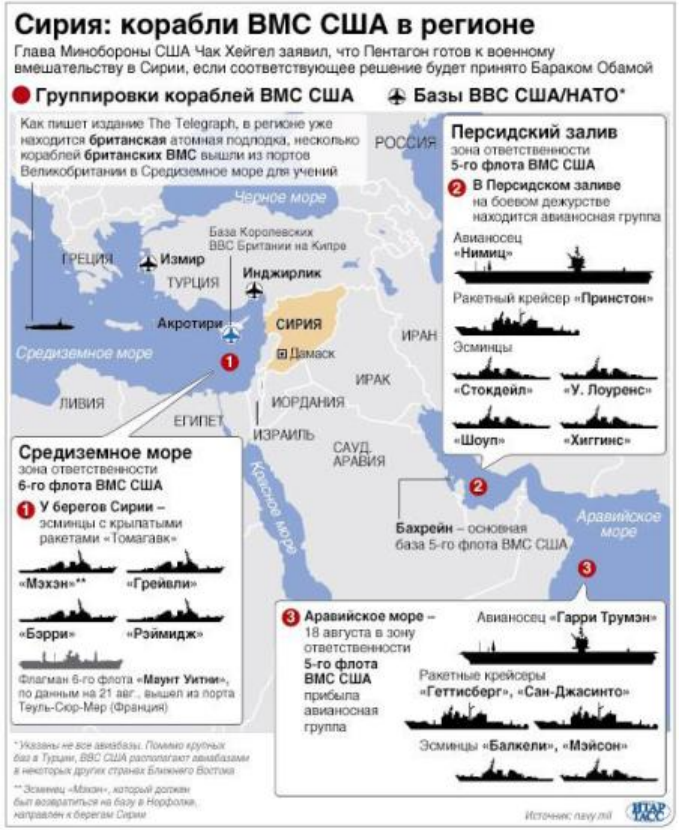
- For analyst Vladimir Kozin, adviser to the Russian presidency, the strikes carried out by four corvettes from the Caspian Sea were not necessary for the military operations in Syria. They just served "to demonstrate the technical superiority of Russia over NATO" ; Kozin further explained that the demonstration also proved the vulnerability of the US anti-ballistic missiles (ABM) infrastructures in Romania or Poland to cruise missile strikes

The meaning of the cruise missile strikes on Syria: the opinion of a British Army retired brigadier

- Brigadier Ben Barry (rtd) from IISS in London writes: "*There is an element of demonstrating capability in order to gain strategic leverage more widely… **If they want to deter what they consider to be adventurism from an irresponsible Nato, then it helps to show they've got the capability to fire cruise missiles from both surface warships and submarines**… This helps to justify to the Russian public the sort of resources that have been put into military modernization…If I was a Russian staff officer, I'd be saying 'this does have a deterrent effect – Nato is going to sit up and take notice of this*'".
- The real goal is to seize Western attention. Having increased Russian military spending by at least 50 per cent since 2005, Russia wants to pretend to be on a par with the US.

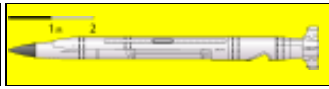
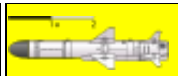
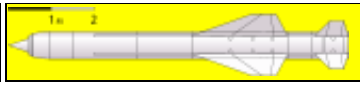
The reality of Russia's Cruise Missiles Capabilities: an optical/political illusion … so far…they CANNOT COMPARE WITH THE USN

- Russia has about 13 platforms confirmed to be capable of launching KALIBR cruise missiles: 1 Project 885 SSN, the *Severodvinsk* (8 silos and 24 missiles), 3 new KILO SSKs, 1 LADA SSK, 3 frigates (Project 22350 and a 2 Project 11356), 2 corvettes (1 Project 1161K and 1 Project 20385) 6 corvettes Project 21631, each with eight missiles. **In total, Russia can fire 24 KALIBR from a single SSN, and more than 100 KALIBR from 10 surface ships and 4 submarines**. More may be deployed on the latest of 13 SSBNs, 26 SSGN/SSNs, 18 SSKs and 4 surface ships.
- **By comparison, the USN can launch more than 5000 cruise missiles from more than 80 surface ships and 50 submarines including four dedicated OHIO SSGN with 154 each**



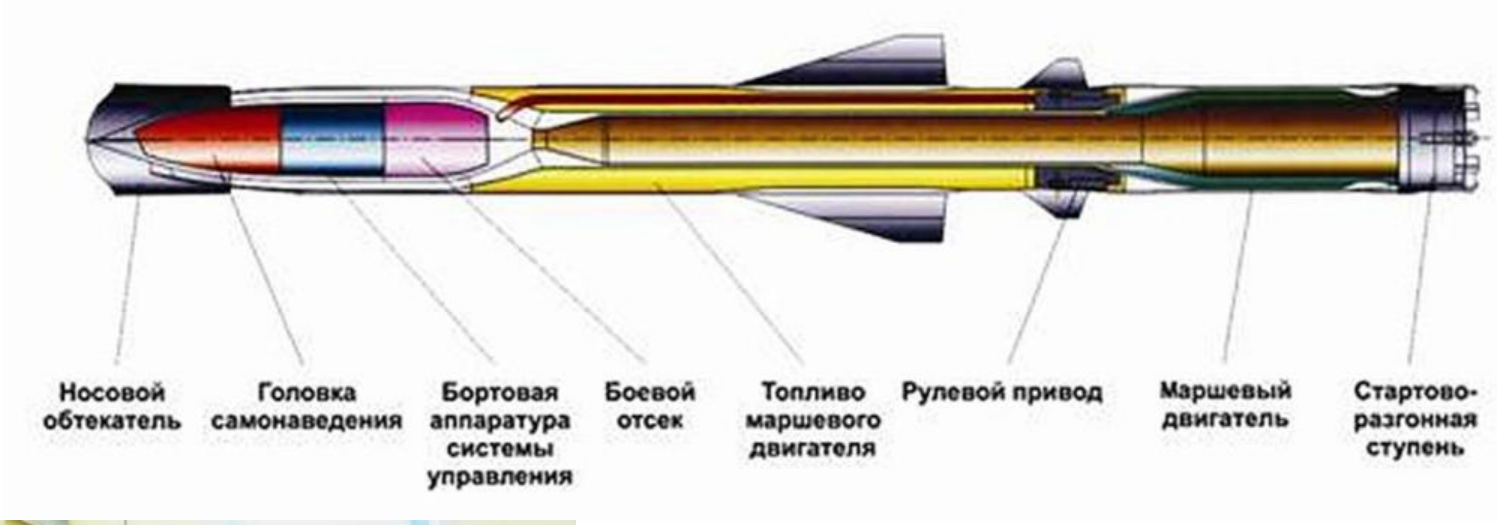
A surprise that should not have been a surprise: all Russian anti-ship missiles currently in service are still Cold War programs for a “missile Navy” that did not have shipborne attack bombers

Soviet Russian anti-ship missiles (with secondary land attack roles)

Conception	NATO designation	Soviet/Russian designation	Size/Shape	Range, km	Speed, Max	Length m	Diameter m	Weight kg	Explosive kg	Targeting	Platforms
1955-60	*SS-N-2 Styx*	*П-15 Термит*		*80*	*0,95*	*6,5*	*0,76*	*2523*	*513*	*Inertial/Active radar homing/IR*	Surf/cb
1959-68	*SS-N-7 Starbright*	*П-70 Аметист*		*80*	*0,95*	*7*	*0,55*	*3650*	*1000*	*Inertial/Active radar homing*	Submarine
1958-68	*AS-4 Kitchen*	*Х-22 Буря*		*600*	*3,5-4,6*	*11,67*	*0,92*	*5780*	*1000*	*Inertial/Active radar homing*	Aircraft
1969-74	*SS-N-12 Sandbox*	*П-500 Базальт*		*550*	*2,5*	*11,7*	*0,88*	*4800*	*1000*	*Inertial/Active radar homing*	Surface
1969-83	SS-N-19 Shipwreck	**П-700 Гранит**		625	2,5	10	0,85	7000	750	*Inertial/Active radar homing*	Surf/sub
1977- not accepted	*SS-N-24 Scorpion*	*П-750 Метеорит*		*5500*	*3*	*12,8*	*0,9*	*6380*	*1000*	*Inertial/Active radar homing*	Air/sub/surf/cb
1973-84	SS-N-22 Sunburn	**П-270 Москит**		240	2,8	9,75	0,76	4450	320	*Inertial/Active radar homing*	Air/surf/cb
1979-87		**П-1000 Вулкан**		700	2,5	11,7	0,88	5800	1000	*Inertial/Active radar homing*	Surface
1975-89	AS-17 Krypton	**Х-31 АД**		160	3,1	5,34	0,36	715	110	*Inertial/Active radar homing*	Aircraft
1983-93	SS-N-27B Sizzler	**3М-54Э « Калибр »**		220	0,8-2,9*	8,22	0,533	2300	200	*Inertial/Active radar homing*	Air/surf/sub/cb
	SS-N-27B Sizzler	**3М-54Э1 « Калибр »**		300	0,8	6,2	0,533	1800	400	*Inertial/Active radar homing*	Surf/sub/cb
1980s-93	SS-N-25 Switchblade	**Х-35 «Уран» Х-35У 3М-24**		130-260	0,85	4,4	0,42	520-560	145	*Inertial/Active radar homing/IR*	Air/surf/cb
1970s-2002	SS-N-26 Strobile	**П-800 « Оникс »**		500-300-120	2,6	8	0,67	3000	300	*Inertial/Active radar homing*	Air/sub/surf/cb

The P-800 ONYX 3M55/П-800 Оникс supersonic anti-ship cruise missile (SS-N-26 STROBILE)

- The P-800 ONYX 3M55/П-800 Оникс (SS-N-26 STROBILE), known as the YAKHONT/BASTION (Яхонт) for exports, is a supersonic anti-ship cruise missile developed by NPO Mashinostroyeniya as a ramjet missile with an air launched Kh-61 variant, replacing P-270 MOSKIT (SS-N-22) and P-700 GRANIT (SS-N-19).
- The P-800 serves as the basis for the joint Russian-Indian supersonic missile BRAHMOS.



KALIBR/ONYX/URAN can also be fired from coastal batteries and KALIBR/URAN can be fitted on a number of platforms in asymmetrical scenarios

- Merchant ships
- Landing ships…
- Trains, trucks…

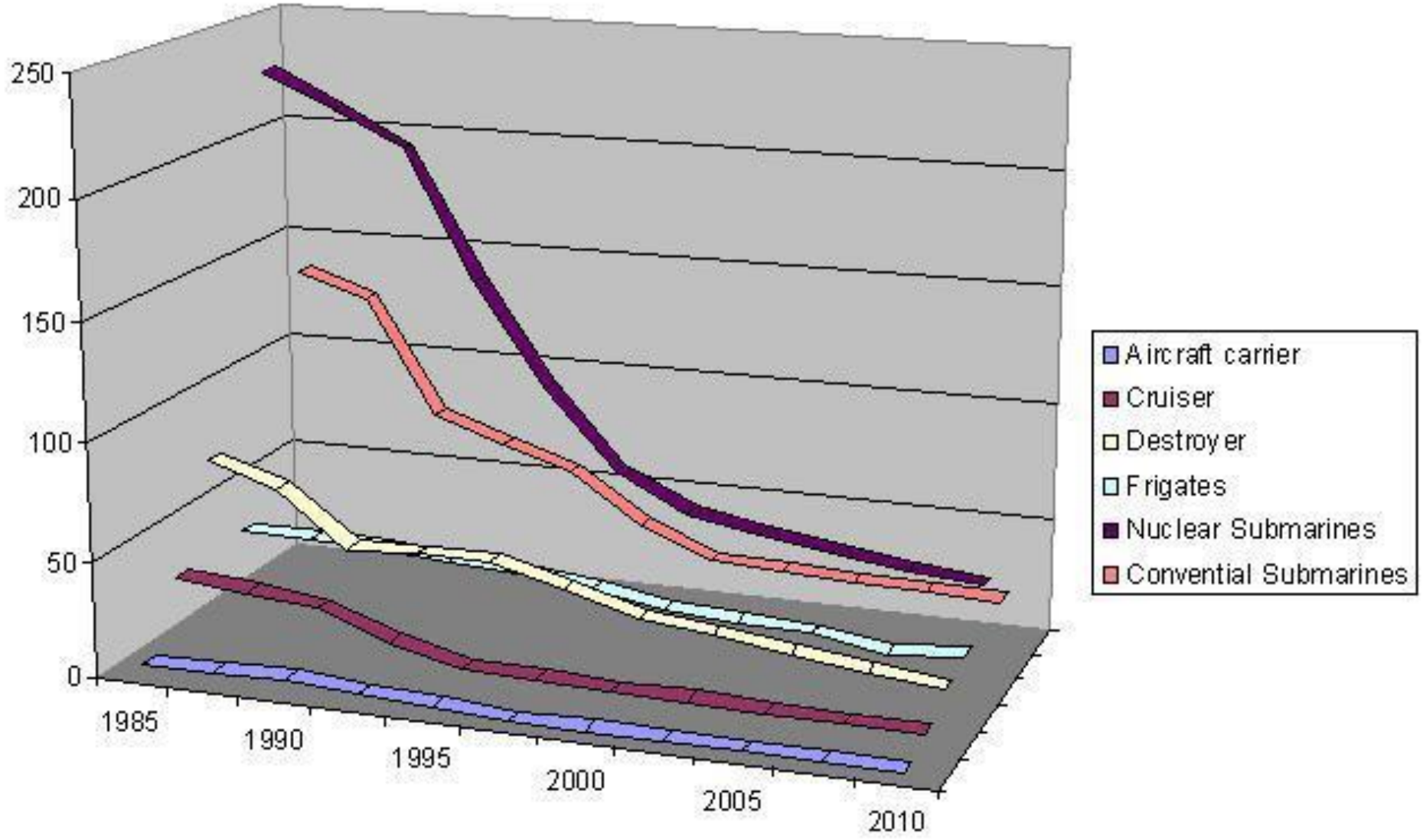
15 years of exports and technology transfers: India, China, Vietnam, Indonesia…

Export versions of KALIBR (CLUB) and ONYX (BASTION) already in service with Algeria, India, Vietnam, China; and Syria, Vietnam and Indonesia, in the anti-shipping role with a potential for land-attack

- Algeria: 'Club-S' on 4 KILO submarines.
- India: 'Club-S' and 'Club-N' on several KILO submarines and TALWAR class frigates
- Vietnam: 'Club-S' on 6 KILO submarines.
- China: 'Club-S‘ on probably 8 of 12 KILO submarines
- Syria apparently received 2 BASTION missile systems (36 missiles each/72). In May 2013, Russia may have delivered more missiles. The warehouse containing the BASTION Missile may have been destroyed in an Israeli air strike on Latakia (5 July 2013), but some missiles may have been removed before.
- India and Vietnam field the joint Indo-Russian BRAHMOS, a version of BASTION.

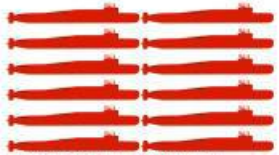
Russia’s capabilities: 2017-22: is there a resurgent Russian naval threat? **Not exactly: the numbers are still going down but Russia is compensating the decline of its OOB with the deployment of cruise missiles**

Spectacular decline of the Russian Navy, losing the second rank to the Chinese Navy

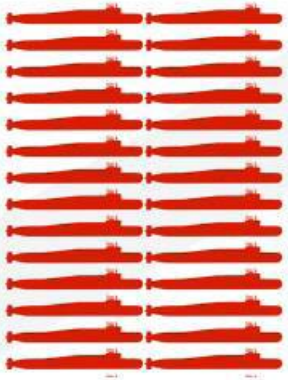


SSBN (59)

6 Project 941 Akula NATO: *Typhoon*
TK-840, TK-818, TK-830, TK-806, TK-821, TK-834



18 Project 667B Murena NATO: *Delta I*
K-279, K-447, K-450, K-385, K-457, K-465, K-460, K-472, K-475, K-171
K-366, K-417, K-477, K-497, K-500, K-512, K-523, K-530
3 Project 667BD Murena-M NATO: *Delta II*
K-182, K-92, K-421
13 Project 667BDR Kalmar NATO: *Delta III*
K-441, K-449, K-455, K-490, K-487, K-496, K-506, K-211, K-223, K-180
K-433, K-129, K-44
6 Project 667BDRM Delfin NATO: *Delta IV*
K-51, K-84, K-64, K-114, K-117, K-407



8 Project 667A Navaga NATO: *Yankee*
K-137, K-420, K-403, K-245, K-214 K-241, K-444, K-258
4 Project 667AU Nalim NATO: *Yankee*
K-446, K-451, K-436, K-430

1 Project 658 NATO: *Hotel*
K-149

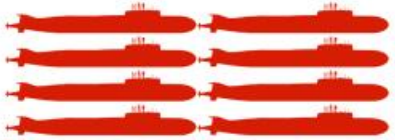
SSBN (13)

1 Project 941 Akula NATO: *Typhoon*
TK-208 Dmitriy Donskoy 824

3 Project 667BDR Kalmar NATO: *Delta III*
K-223 Podolsk, K-433 Svyatoy Georgiy Pobedonosets, K-44 Ryazan
6 Project 667BDRM Delfin NATO: *Delta IV*
K-51 Verkhoturye, K-84 Ekaterinburg, K-18 Karelia, K-114 Tula
K-117 Bryansk, K-407 Novomoskovsk

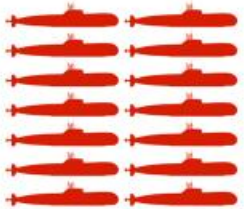
3 Project 955 Borey NATO: *Borei*
K-535 Yury Dolgorukiy, K-550 Alexandr Nevskiy
K-551 Vladimir Monomakh

SSGN (58)



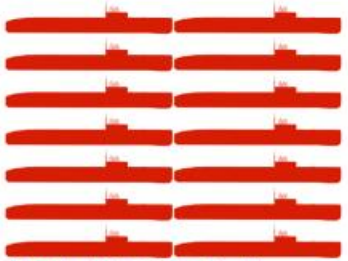
2 Project 949 Granit NATO: *Oscar I*
K-525, K-206
6 Project 949A Antey NATO: *Oscar II*
K-148, K-173, K-132, K-119, K-410, K-442

6 Project 667AT NATO: *Yankee Notch*
K-253, K-395, K-411, K-423, K-420, K-403



8 Project 670 Skat NATO: *Charlie I*
K-43, K-25, K-143, K-313, K-308, K-302, K-325, K-429
6 Project 670M Chayka NATO: *Charlie II*

16 Project 651 NATO: *Juliett*
K-156, K-85, K-70, K-24, K-77, K-81, K-68, K-63, K-58, K-73
K-67, K-78, K-203, K-304, K-318, K-120



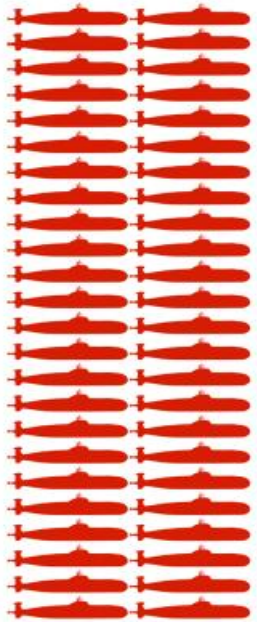
14 Project 675 NATO: *Echo II*
K-1, K-7, K-22, K-28, K-35, K-48, K-56, K-125, K-128, K-131

SSGN (6)

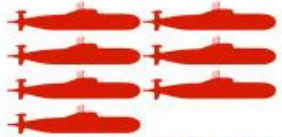
6 Project 949A Antey NATO: *Oscar II*
K-150 Tomsk, K-442 Chelyabinsk, K-186 Omsk
K-119 Voronezh, K-410 Smolensk, K-456 Vilyuchinsk

1 Project 885 Yasen NATO: *Graney*
K-560 Severodvinsk

SSN (64)



12 Project 671 Yorsh NATO: *Victor I*
K-38, K-69, K-147, K-53, K-306, K-323, K-370, K-438, K-367, K-398
K-462, K-481
2 Project 671V Yorsh NATO: *Victor I*
K-454, K-469
8 Project 671RT Syomga NATO: *Victor II*
K-387, K-371, K-467, K-488, K-505, K-495, K-513, K-517
22 Project 671RTM Shchuka NATO: *Victor III*
K-524, K-254, K-502, K-527, K-298, K-358, K-299, K-244, K-247, K-507
K-251, K-255, K-324, K-355, K-360, K-218, K-242, K-492, K-412, K-305
K-264, K-315
4 Project 671RTMK Shchuka NATO: *Victor III*
K-292, K-388, K-138, K-414



7 Project 971 Shchuka-B NATO: *Akula*
K-480, K-317, K-284, K-263, K-322, K-391, K-331

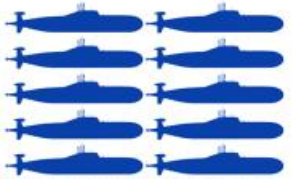
2 Project 945 Barrakuda NATO: *Sierra I*
K-239, K-276

1 Project 705K Lira NATO: *Alfa*
K-123

6 Project 627A Kit NATO: *November*

SSN (17)

4 Project 671RTMK Shchuka NATO: *Victor III*
B-388 Petrozavodsk, B-138 Obninsk, B-414 Daniil Moskovskiy
B-448 Tambov

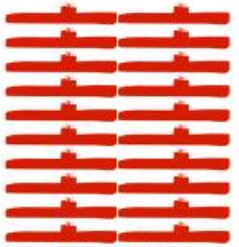


9 Project 971 Shchuka-B NATO: *Akula*
K-317 Pantera, K-331 Magadan, K-419 Kuzbass, K-461 Volk
K-328 Leopard, K-154 Tigr, K-295 Samara, K-391 Bratsk
K-157 Vepr
1 Project 09711 NATO: *Akula III*
K-335 Gepard

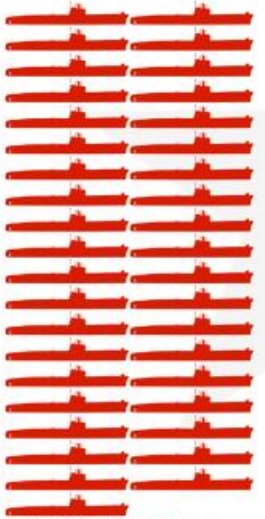
2 Project 945A Barrakuda NATO: *Sierra II*
K-534 Pskov, K-336 Nizhniy

SSK (59)

Project 877 Paltus NATO: *Kilo*
B-445, B-459, B-464, B-471, B-494, B-800, B-871, B-808, B-177, B-806
B-340, B-190, B-227, B-260, B-345, B-394, B-402, B-248

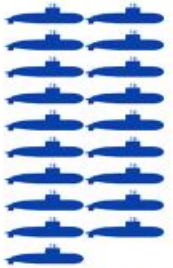


Project 641B Som NATO: *Tango*
B-443, B-474, B-437, B-498, B-515, B-519, B-519, B-290, B-303, B-146
B-546, B-30, B-215, B-396, B-307, B-319, B-225, B-312, B-380



Project 641 NATO: *Foxtrot*
B-36, B-57, B-116, B-143, B-4, B-153, B-164, B-33, B-105, B-50
B-31, B-2, B-55, B-101, B-6, B-15, B-103, B-109, B-107, B-25
B-21, B-9, B-26, B-28, B-34, B-40, B-41, B-46, B-49, B-39
B-397, B-400, B-413, B-416, B-205, B-213, B-440, B-409, B-427

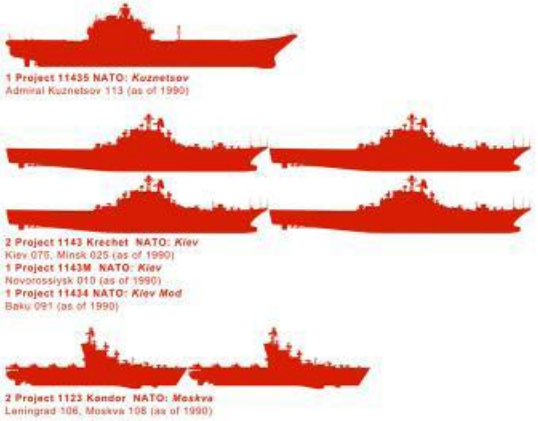
SSK (20)



12 Project 877 Paltus NATO: *Kilo*
B-260 Chita, B-227 Vyborg, B-402 Vologda
B-445 Svyatoy Nikolay Chudotvorets, B-808 Yaroslavl
B-464 Ust'-Kamchatsk, B-459 Vladikavkaz, B-471 Magnitogorsk
B-494 Ust'-Bolsheretsk, B-177 Lipetsk, B-190 Krasnokamensk
B-345 Mogocha
1 Project 877EKM Paltus NATO: *Kilo*
B-806 Dmitrov
1 Project 877LPMB Paltus NATO: *Kilo*
B-800 Kaluga
1 Project 877V Paltus NATO: *Kilo*
B-871 Alrosa
4 Project 06363 Paltus NATO: *Improved Kilo*
B-261 Novorossiysk, B-237 Rostov na Donu, B-262 Stary Oskol
B-265 Krasnodar

1 Project 677 Lada NATO: *Lada*
B-585 Sankt-Peterburg

CV (7)



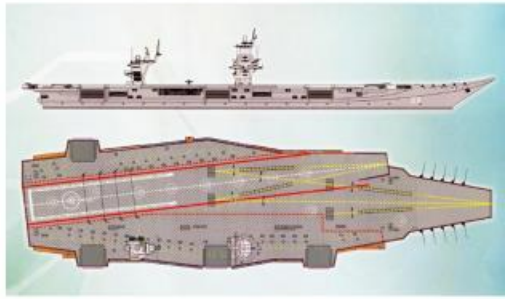
1 Project 11435 NATO: *Kuznetsov*
Admiral Kuznetsov 113 (as of 1990)

2 Project 1143 Krechet NATO: *Kiev*
Kiev 075, Minsk 025 (as of 1990)
1 Project 1143M NATO: *Kiev*
Novorossiysk 010 (as of 1990)
1 Project 11434 NATO: *Kiev Mod*
Baku 091 (as of 1990)

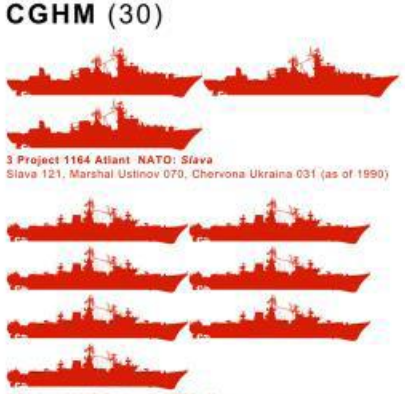
2 Project 1123 Kondor NATO: *Moskva*
Leningrad 106, Moskva 108 (as of 1990)

CV (1)

1 Project 11435 NATO: *Kuznetsov*
Admiral Kuznetsov 063



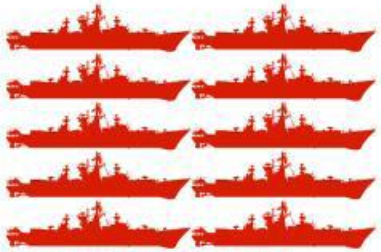
CGHM (30)



3 Project 1164 Atlant NATO: *Slava*
Slava 121, Marshal Ustinov 070, Chervona Ukraina 031 (as of 1990)

6 Project 1134B Berkut-B NATO: *Kara*
Nikolaev 582, Ochakov 707, Kerch 711, Petropavlovsk 561
Tashkent 518, Vladivostok 541 (as of 1990)
1 Project 1134BF NATO: *Kara*
Azov 701 (as of 1990)

4 Project 1134 Berkut NATO: *Kresta I*
Admiral Zozulya 052, Vladivostok 034, Vice-admiral Drozd 068
Sevastopol 033 (as of 1990)



10 Project 1134A Berkut-A NATO: *Kresta II*
Kronshtadt 657, Admiral Isakov 679, Admiral Nakhimov 690
Admiral Makarov 635, Marshal Voroshilov 504
Admiral Oktyabr`skiy 531, Admiral Isachenkov 640
Marshal Timoshenko 655, Vasiliy Chapaev 590
Admiral Yumashev 627 (as of 1990)

4 Project 58 Grozny NATO: *Kynda*
Grozny 145, Admiral Fokin 017, Admiral Golovko 105
Varyag 032 (as of 1990)

2 Project 68bis NATO: *Sverdlov*
Murmansk 057, Zhdanov 101 (as of 1990)

CGHM (3)

3 Project 1164 Atlant NATO: *Slava*
Moskva 121, Marshal Ustinov 070, Varyag 031

CGHMN (3)

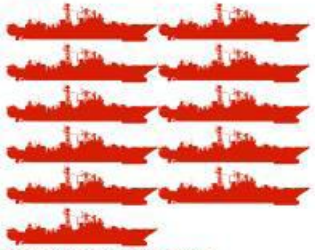
3 Project 1144 Orlan NATO: *Kirov*
Kirov 092 (as of 1990)
Project 11442 NATO: *Kirov*
Frunze 010, Kalinin 085 (as of 1990)

CGHMN (1) + 1 (refit) +1 (reserve)

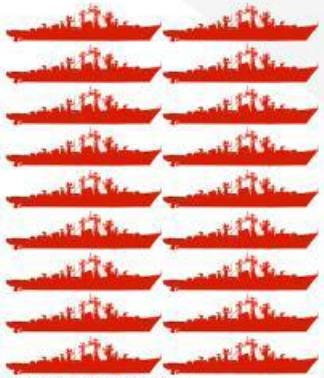
1 Project 11442 NATO: *Kirov*
Petr Velikiy 099

DDGHM/DDGM (45)

11 Project 956 Sarych NATO: *Sovremenny*
Sovremennyy 420, Otchayannyy 433, Otlichnyy 408
Osmotritelnyy 755, Bezuprechnyy 413, Boevoy 770
Stoykiy 727, Okrylyonnyy 444, Burnyy 722
Veduschiy 420, Bystryy, 676, Rastoropnyy 673
Bezboyaznennyy 672 (as of 1990)



11 Project 1155 Fregat NATO: *Udaloy I*
Udaloy 612, Admiral Zakharov 541, Admiral Spiridonov 533
Marshal Shaposhnikov 534, Simferopol 663, Admiral Vinogradov 554
Admiral Kharlamov 498, Vice-Admiral Kulakov 686, Marshal Vasilevski
Admiral Tributs 592, Admiral Levchenko 671 (as of 1990)



17 Project 61 NATO: *Kashin*
Komsomolets Ukrainy 715, Soobrazitelnyyy 611, Provornyyy 713
Stroynyyy 660, Krasny Kavkaz 710, Reshitelnyyy 708
Smyshlenyyy 644, Strogiy 504, Smetlivyy 714, Smelyy 724
Krasny Krym 703, Sposobnyyy 578, Skoryy 705
Obraztsovyyy 435, Odarennyyy 564, Slavnyyy 449
Steregushchiyy 580 (as of 1990)
1 Project 61M NATO: Mod Kashin
Sderzhannyyy 702 (as of 1990)

3 Project 57A NATO: *Kanin*
Derzkiy 851, Upornyy 518, Zorkiy 888 (as of 1990)

2 Project 56M NATO: *Kildin*
Prozorlivyy 962, Neulovimyy 268 (as of 1990)

DDGHM/DDGM (14)

5 Project 956 Sarych NATO: *Sovremenny*
Bystryy 715, Gremyashchiy 406, Bespokoynyy 620, Nastoychivyy 610
Admiral Ushakov434

7 Project 1155 Fregat NATO: *Udaloy I*
Vice-Admiral Kulakov 626, Marshal Shaposhnikov 543
Admiral Tributs 564, Severomorsk 619, Admiral Vinogradov 572
Admiral Levchenko 605, Admiral Panteleyev 548
1 Project 11551 Fregat NATO: *Udaloy II*
Admiral Chabanenko 650

1 Project 01090 NATO: *Mod Kashin*
Smetlivyy 810

FFGHM (122)

21 Project 1135 Burevestnik NATO: *Krivak I*
Bditelnyy 744, Bodryy 710, Svirepyy 719, Silnyy 500
Storozhevoy 627, Razumnyy 633, Razyashchiy 675, Druzhnyy 741
Dostoynyy 978, Doblestnyy 949, Deyatelnyy 613, Bezzavetnyy 811
Bezukoriznennyy 802, Ladnyy 801, Poryvistyy 618, Zharkiy 921
Retivy 670, Leningradskiy Komsomolets 950, Letuchiy 645
Pylkiy 807, Zadornyy 959 (as of 1990)
11 Project 1135M Burevestnik-M NATO: *Krivak II*
Rezvyy 970, Rezkiy 657, Razitelnyy 819, Grozyashchiy 620
Neukrotimyy 731, Gromkiy 968, Bessmennyy 933, Gordelivy 643
Ryavnyy 689, Revnostnyy 662, Pytlivyy 808 (as of 1990)

11 Project 35 NATO: *Mirka I*
SKR-7 773, SKR-20 741, SKR-32 756, SKR-39
SKR-86 742, Ivan Sladkov, SKR-53 824, SKR-24
SKR-84 817, SKR-12 776
Komsomolu Belorussii 733 (as of 1990)
7 Project 35M NATO: *Mirka II*
SKR-6 821, SKR-13 822, SKR-90 711, SKR-117 825
SKR-19 718, Gangutec 709, SKR-48 831 (as of 1990)

1 Project 1159 Yaguar NATO: *Koni I*
Delfin 805 (as of 1990)

30 Project 50 NATO: *Riga*
Gornostay 804, Rys 838, Sarych, Puma 505,
Korsak 110, Grizon 331, SKR-51 810, SKR-53 114
SKR-58, SM-141, SKR-67, Bars 922, Sobol,
Kuguar 507, Einot, Filin 320, Kobchik 743, Tur
Olen 279, SKR-69, SKR-70 906, SKR-71, OT-28 754
SKR-73 425, SKR-8 153, SKR-15, Zubr 911, Bizon,
Aist, Pelikan (as of 1990)

13 Project 159 NATO: *Petya*
SKR-38 748, SKR-47, SKR-26, OS-34 920, SKR-9 000,
SKR-22 767, SKR-33 743, SKR-27 814, OS-333 888
SKR-34 768, SKR-40 804, SKR-11 619, SKR-3, (as of 1990)
22 Project 159A NATO: *Petya*
SKR-29 915, Bakinets 450, SKR-103 915
SKR-106 927, OS-226 820, SKR-112 815
SKR-115 833, SKR-98 934, Krasnodarsky Komsomolets 833
Komsomolets Dagestana 421, SKR-120 965, SKR-123
SKR-126 961, SKR-78 668, Orlovsky komsomolets 800
SKR-92, SKR-130 667, SKR-133 699, SKR-138,
SKR-141 631, SKR-128, SKR-135 (as of 1990)
6 Project 159AE NATO: *Petya*
SKR-100, SKR-104, SKR-108, SKR-95, SKR-82,
SKR-96(as of 1990)

FFGHM/FFGM (10)

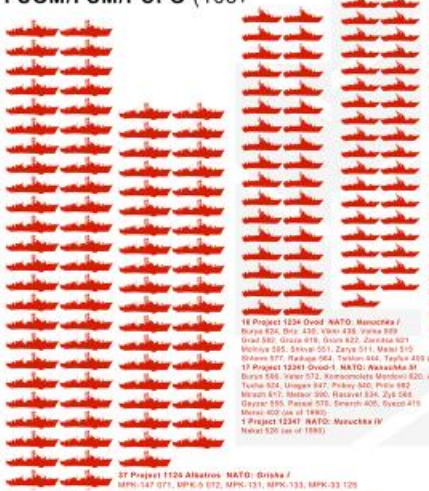
1 Project 1135 Burevestnik NATO: *Krivak I*
Ladnyy 801
1 Project 1135M Burevestnik-M NATO: *Krivak II*
Pytlivyy 808

2 Project 11540 Yastreb NATO: *Neustrashimy*
Neustrashimyy 712, Yaroslav Mudry 727

4 Project 20380 NATO: *Steregushchy*
Steregushchiy 530, Soobrazitelnyy 531, Boikiy 532
Stoikiy 545

12Project 11661K NATO: *Gepard*
Tatarstan 691, Dagestan 693

FSGM/FSM/PCFG (168)



13 Project 12411T Molniya-1 NATO: *Tarantul*
Kaliningradskiy komsomolets 825, Kirovskiy komsomolets 820, Poltavskiy komsomolets 956
R-6 800, Krasnodarskiy komsomolets 965, Kuybishevskiy komsomolets 964, R-101 729, R-129
R-257 833, R-42 835, R-45 919, R-69, R-79
1 Project 12417 NATO: *Tarantul*
R-71 962
23 Project 12411 NATO: *Tarantul*
R-46 960, Tambovskiy komsomolets 835, R-60 955, Poltavskiy komsomolets 965
R-187, R-239, R-334, R-109, R-66 947, R-85 938, R-103, R-113, R-158, R-76
R-83 990, R-229 975, R-230 989, R-240 938, R-261 943, R-271
R-442 999, R-297, R-298

3 Project 21630 Buyan NATO: *Buyan*
Astrakhan 012, Volgodonsk 161, Makhachkala 182

12 Project 1331M NATO: *Parchim*
MPK-192 247, MPK-205 223, MPK-67 242
MPK-99 255, MPK-105 245, MPK-213 222
MPK-216 071, MPK-219 209, MPK-224 218
MPK-227 243, MPK-228 244, MPK-229 232
(as of 1990)

3 Project 21631 Buyan-M NATO: *Buyan-M*
Grad Svlyazhsk 021, Uglich 022, Velky Ustug 023, Zelony Dol 602
Serpukhov 603.

18 Project 1234 Ovod NATO: *Nanuchka I*
Burya 634, Bliz 430, Vikhr 438, Volna 589
Grad 580, Groza 619, Grom 622, Zarnitsa 601
Molniya 585, Smerch 551, Zarya 511, Meteor 515
Shtorm 577, Raduga 564, Tyfun 444, Tayfun 459 (as of 1990)
17 Project 12341 Ovod-1 NATO: *Nanuchka III*
Buran 586, Veter 572, Komsomolets Mordovii 620, Aysberg 535
Tucha 534, Uragan 547, Priboy 500, Priliv 562
Mirazh 617, Meteor 590, Rassvet 534, Zyb 548
Geyzer 555, Passat 570, Smerch 405, Syezd 415
Moroz 409 (as of 1990)
1 Project 12347 NATO: *Nanuchka IV*
Nakat 526 (as of 1990)

2 Project 1124 Albatros NATO: *Grisha I*
Alexandrovets 059, Kholmsk 369
16 Project 1124M NATO: *Grisha III/V*
Muromets 064, Suzdaletz 071, Koryuyets 390, Kasimov 055, Metel
MPK-82 375, Ust-Ilimsk 362, Monchegorsk 190, Snezhnogorsk 196
Pavorino 053, Eysk 054, Brest 199, Naryan-Mar 138
Sovetskaya Gavan 350, Yunga 113, MPK-221 354
MPK-107 332, Omega 164

37 Project 1124 Albatros NATO: *Grisha I*
MPK-147 071, MPK-5 072, MPK-131, MPK-133, MPK-33 126
MPK-47 104, MPK-3 109, MPK-8 052, Odesskiy komsomolets 054
MPK-40 116, MPK-138 162, MPK-141 112, MPK-152 175
MPK-161 248, MPK-2 225, MPK-164 074, MPK-168 221
MPK-49 059, MPK-52 188, MPK-31 120, Komsomolets Gruzii 078
MPK-9 073, Komsomolets Latvii 213, MPK-90 371, MPK-41 303
MPK-117 339, MPK-91 382, MPK-122 308, MPK-163 302, MPK-145 312
MPK-178 337, MPK-4 355, Zaporozhskiy komsomolets 345
MPK-159 399, MPK-37 326, MPK-176 333, MPK-191 322 (as of 1990)
32 Project 1124M NATO: *Grisha II*
Kievskiy komsomolets 064, Komsomolets Moldavii 071, MPK-139 129, MPK-190 194,
Komsomolets Armenii 055, MPK-202 145, MPK-113 171, MPK-207 053, MPK-217 054
Leningskaya kuznitsa 383, MPK-82, MPK-85, MPK-142 181, MPK-156 131, MPK-69 157
Brestskiy komsomolets 162, MPK-156 133, MPK-187 100, Yunga 148, Arkhangelskiy komsomolets 118
MPK-58 156, MPK-7 087, MPK-10 083, MPK-14 080, MPK-59, MPK-200 368
MPK-89 274, MPK-222 328, MPK-39 331, Irkutskiy komsomolets 342, MPK-84, MPK-17 (as of 1990)
11 Project 1124P NATO: *Grisha III*
Brikuni 016, Zhemchug 048, Izumrud 022, Rubin 028, Ametist, Onega 010
Saptr 038, Izoral 011, Provorny 092, Predanny 078, Nadezhny 047, Dozorny 088 (as of 1990)
5 Project P1124 NATO: *Grisha IV*
Bditelny 055, Bezupreshny 014, Zorky 058, Reshitelny 057, Smely 052
(as of 1990)

FSGM/FSM/PCFG (68)

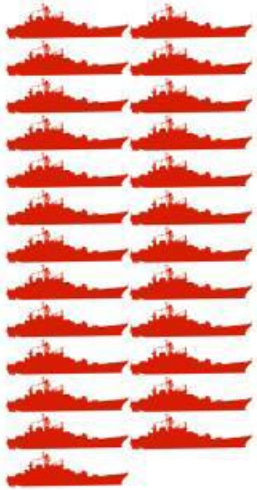
7 Project 1331M NATO: *Parchim*
MPK-192 304, Kazanets 311, Zelenodolsk 308
MPK-105 245, Aleksin 218, MPK-227 243
Kalmykiya 232

12 Project 12341 Ovod-1 NATO: *Nanuchka III*
Sirsi 620, Aysberg 535, Mirazh 617, Zyb 548, Geyzer 555
Passat 570, Liven 551, Raziv 450, Iney 418, Rassvet 520
Smerch 423, Moroz 409
1 Project 12347 NATO: *Nanuchka IV*
Nakat 526

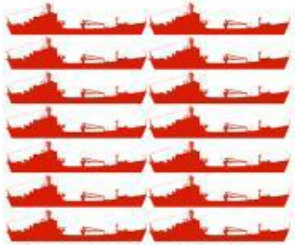
4 Project 12411T Molniya-1 NATO: *Tarantul*
R-79 995, Stupinets 765, Kuznetsk 852, R-257 833
1 Project 12417 NATO: *Tarantul*
Shuya 962
20 Project 12411 NATO: *Tarantul*
R-47 819, R-60 860, MAK-160 054, Zarechny 855, Ivanovo
R-109 952, R-239 953, R-261 991, R-297 951, R-298 971
Dimitrovgrad 825, R-11 949, R-14 924, Morshansk 874
R-18 937, R-19 878, R-20 921, R-24 946, R-2 870, R-28 91

LST (42)

3 Project 1174 Nosorog NATO: *Ivan Rogov*
Ivan Rogov 113, Alexandr Nikolaev 057, Mitrofan Moskalenko 016
(as of 1990)

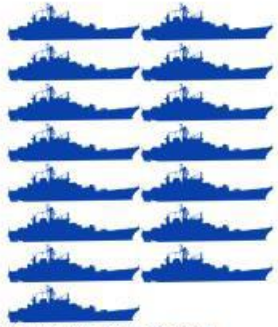


11 Project 775 NATO: *Ropucha*
SDK-47 134, SDK-48 061, SDK-63 083, SDK-90 058
SDK-91 025, SDK-181 083, SDK-182 040, SDK-183 021
SDK-197 055, SDK-200 011, SDK-55 014
(as of 1990)
13 Project 775/I NATO: *Ropucha II*
BDK-14 050, BDK-101 081, BDK-105 103, BDK-98 058
BDK-32 018, BDK-43 127, BDK-58 102, BDK-45 036
BDK-56 154, BDK-60 110, BDK-64 158, BDK-46 142
BDK-67 156 (as of 1990)
1 Project 775/II NATO: *Ropucha II*
BDK-54 (as of 1990)



14 Project 1171 Tapir NATO: *Alligator*
BDK-10 150, BDK-6 151, BDK-13 093, BDK-62 030
BDK-66 085, BDK-69 150, BDK-77 099, Doneckiy shakhter
BDK-100 120, BDK-104 146, Alexandr Torcev 062, Petr Ilyichev 044
Nikolay Vilkov 068, Nikolay Filchenkov 142 (as of 1990)

LST (19)



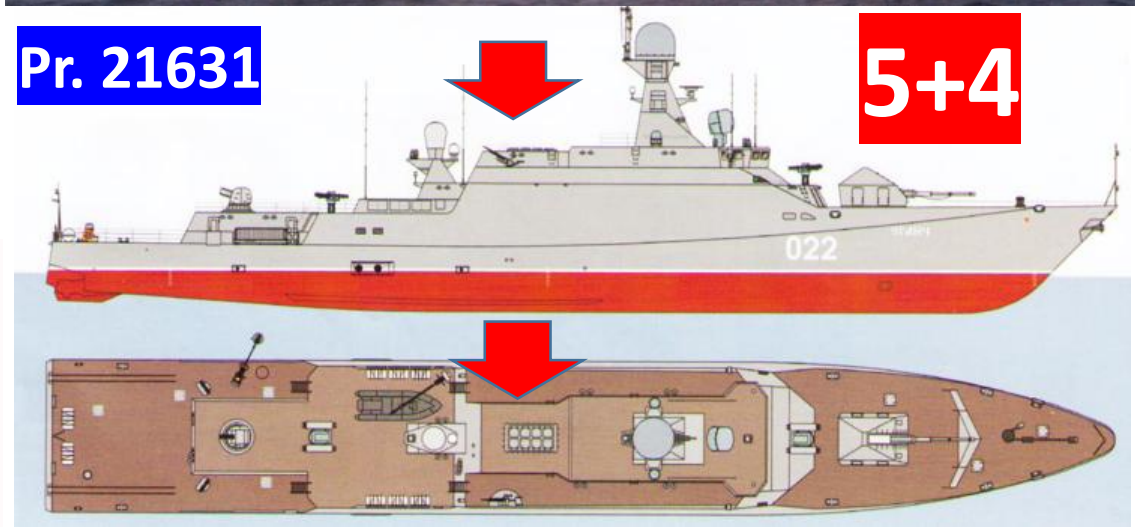
3 Project 775 NATO: *Ropucha*
Olenegorskiy Gornyak 012, Kondopoga 027, Aleksandr Otrakovskiy 031
9 Project 775/I NATO: *Ropucha II*
Oslyabya 066, BDK-98 055, Minsk 127, Kaliningrad 102
Georgiy Pobedonosets 016, Aleksandr Shabalin 110
Caesar Kunikov 158, Novocherkassk 142, Yamal 156
3 Project 775M NATO: *Ropucha III*
Azov 151, Peresvet 077, Korolev 130

4 Project 1171 Tapir NATO: *Alligator*
Saratov 150, Orsk 148, Nikolay Vilkov 081, Nikolay Filchenkov 152

Is there a resurgent Russian naval threat 25 years after the collapse of the USSR? ….. LESS platforms but MORE missiles

- ONLY **ONE** unit of a new class of SSN/SSGNs (designed in the 1980s) built in 25 years (7 more units are expected but according to 1992 projections they should all have been commissioned by now)
- The priority on a SSBN replacement program mating components of uncompleted or scrapped AKULA SSNs and OSCAR SSGNs: **FOUR** UNITS COMPLETED
- ONLY **ONE** unit of a new (failed) SSK design (LADA) still undergoing trials in the Northern fleet ; a STOP GAP resumption of KILO production with 3 UNITS so far
- NO NEW CRUISER/DESTROYER CLASSES SINCE 1991
- TWO NEW CLASSES OF FRIGATES (GORSHKOV, GRIGOROVITCH), WITH **THREE UNITS** COMPLETED SO FAR (ONE and TWO)
- The cruise missiles and submarines' deployments make the Russian Navy intimidating but it is an old fleet nearing 30 years of age with most platforms needing replacement or modernization

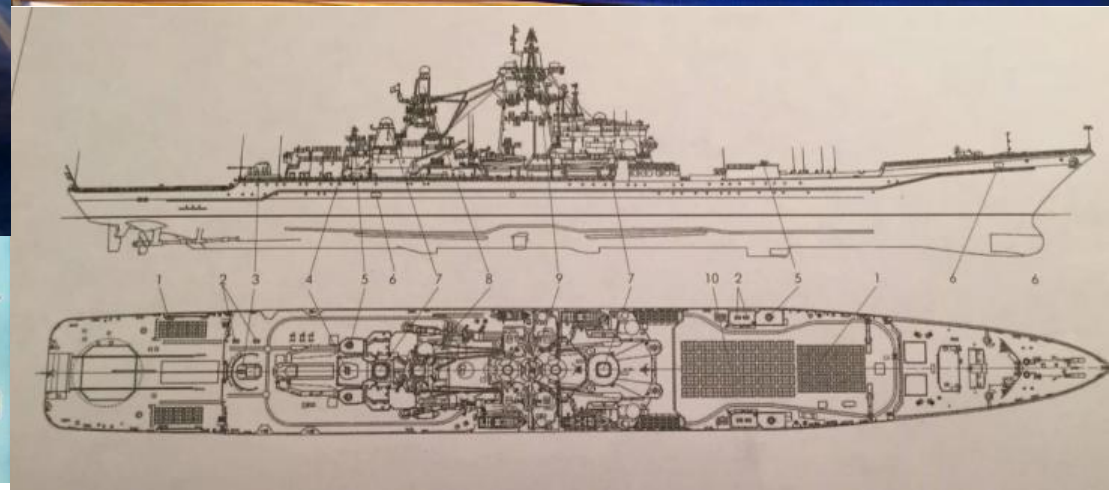
Russia's LCS:
- **4 missile corvettes classes** and
- **2 ice-reinforced OPV classes** all fitted with "KALIBR"/"ONIKS" as **temporary substitutes for 2 classes of frigates** halted by the Ukrainian embargo on gas turbines



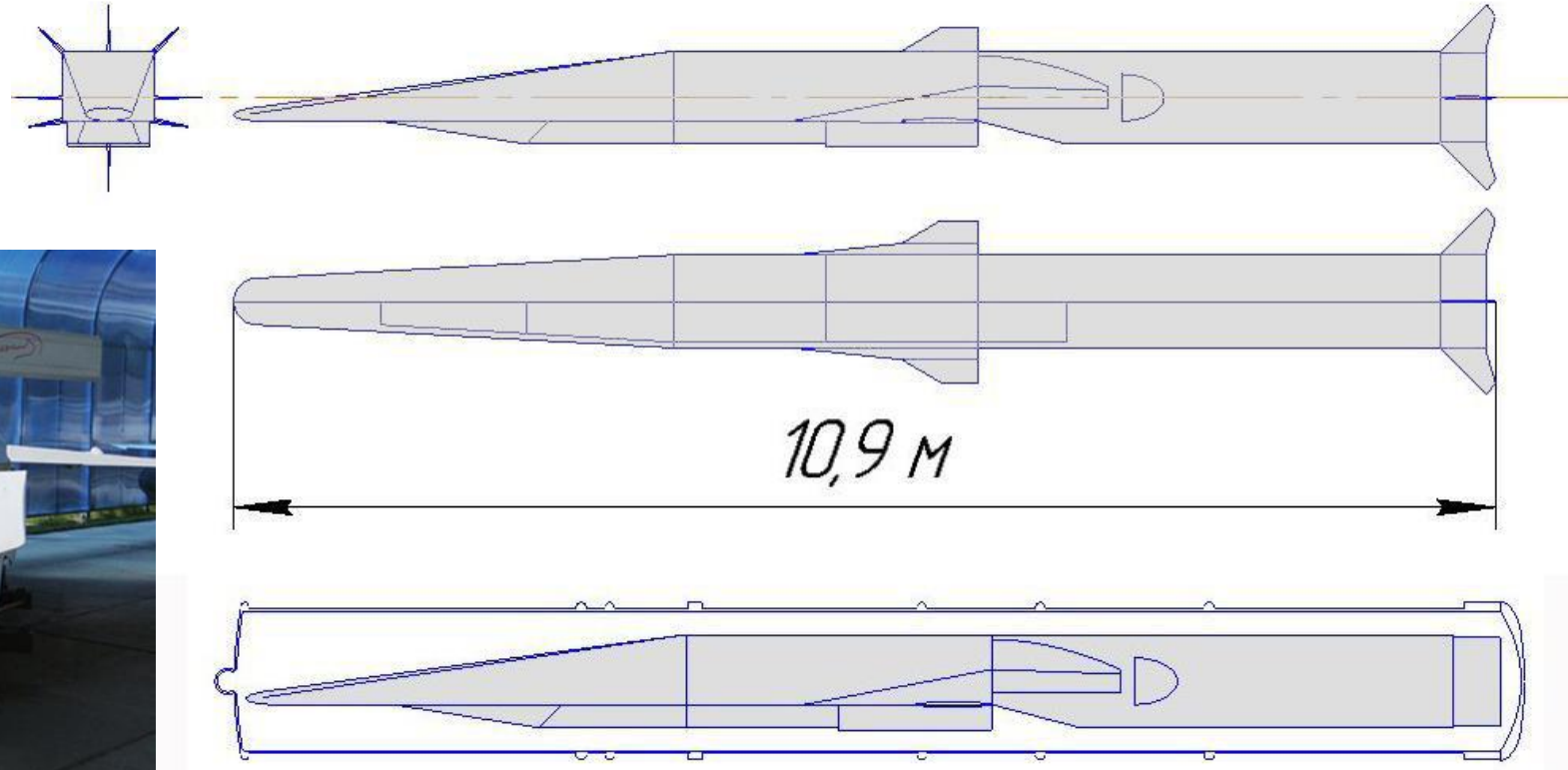
Russia’s future capabilities: beyond 2022

Future platforms to be expected: most fitted with KALIBR, ONIKS and later the ZIRCON hypersonic cruise missile: YES, A GAME CHANGER…

- 6 x GORSHKOV frigates to be completed by 2025 when Russia's production of gas turbines will permit
- 6 x 18 000 tons "Destroyer Leader" with the lead unit expected to be laid down in 2019
- 2 refurbished KIROV battle cruisers with 80 KALIBR/ONIKS/ZIRCON; 8 refurbished UDALOY destroyers
- 3/4 and 3/4 refurbished OSCAR SSGN and AKULA SSN with KALIBR/ONIKS
- 1 or 2 x 100 000 tons aircraft carriers after 2030
- 6 NEW CON KILO SSK for the Pacific Fleet
- Follow on SSN/SSGNs HUSKY Class and SSBNs
- Four classes of missile corvettes
- A replacement for MISTRAL



ZIRCON hypersonic missile: THE GAME CHANGER TO COME: will fit in the current VLS



Cooperation with India on the BHRAMOS II Hypersonic missile

- A commercial venture
- A special relation with India that explains why Russia is sharing a revolutionary new technology
- as a side effect sharing the hypersonic technology with India contributes to contain China's naval rise

Understanding Russia’s rationale

The 2000 and 2009 defense doctrines against interference in Russian affairs

With the Kosovo crisis, 30 March 1999, Russia announced its intention to deploy the main units of the Black Sea Fleet but failed to do so; in early July 1999, five Russian amphibious ships carrying elements of the Tula and Pskov airborne divisions deployed to Thessaloniki to strengthen the Russian peacekeeping force in Kosovo.

Published in 2000 and 2009, the second and third military doctrines of the Russian Federation repeated the defensive principles stated in the text first published in 1993.

They added “external threats” including "interference in Russia's internal affairs, attempts to ignore Russian interests in the resolution of international conflicts, changing the regional balances on the Russian borders... technical or psychological information operations that damage the military security of Russia and its allies and discriminatory attitudes against Russian citizens in foreign countries "

The 2001 Maritime Doctrine against NATO's expansion and supporting the development of the Russian Far East

Written by the admirals Kuroyedov (then Commander of the Navy and author of a thesis defended in the presence of President Putin) and Zakharenko, the "maritime doctrine until 2020" is published on August 27th, 2001.

For the Atlantic, this doctrine notes that the determining factor is NATO's expansion; for the Asia Pacific, it explains that "... The Russian Far East has huge resources ... but it is sparsely populated and isolated ... These contradictions are accompanied by an intense military and economic development among neighbors in the Asia Pacific ... The objective is... accelerating social and economic development of the Russian Far East through the intensification of maritime activity by the Russian Federation ..."

The December 31st 2015 Military Doctrine: RUSSIA'S THREAT PERCEPTION: NATO EXPANSION

- *15. Наращивание силового потенциала Организации Североатлантического договора (НАТО) и наделение ее глобальными функциями, реализуемыми в нарушение норм международного права, активизация военной деятельности стран блока, дальнейшее расширение альянса, приближение его военной инфраструктуры к российским границам создают угрозу национальной безопасности.*

[15. **The capacity-building of the North Atlantic Treaty Organization (NATO),** its global role carried out in violation of international law, the intensification of its military activities, **the further expansion of the alliance and its military infrastructure closer to Russian borders, pose a threat to national security**].

- *Возможности поддержания глобальной и региональной стабильности существенно снижаются при размещении в Европе, Азиатско-Тихоокеанском регионе и на Ближнем Востоке компонентов системы противоракетной обороны США, в условиях практической реализации концепции "глобального удара", развертывания стратегических неядерных систем высокоточного оружия, а также в случае размещения оружия в космосе*.

[**The possibilities of maintaining global and regional stability are significantly reduced with the deployment of components for a US missile defense system in Europe, Asia-Pacific and the Middle East**, to implement the concept of "global strike“ together with strategic nonnuclear precision weapon systems and the deployment of weapons in space.]

RUSSIA'S THREAT PERCEPTION: WESTERN INTERVENTIONISM AND ITS DESTABILISING EFFECT

- *18. Практика свержения легитимных политических режимов, провоцирования внутригосударственных нестабильности и конфликтов получает все более широкое распространение. Наряду с сохраняющимися очагами напряженности на Ближнем и Среднем Востоке, в Африке, Южной Азии, на Корейском полуострове появляются новые "горячие точки", расширяются зоны, не контролируемые властями каких-либо государств. Территории вооруженных конфликтов становятся базой для распространения терроризма, межнациональной розни, религиозной вражды, иных проявлений экстремизма. Появление террористической организации, объявившей себя "Исламским государством", и укрепление ее влияния стали результатом политики двойных стандартов, которой некоторые государства придерживаются в области борьбы с терроризмом.*

[18. **The practice of overthrowing the legitimate political regimes, provoking domestic instability and conflict is becoming more widespread.** Along with the persistent hotbeds of tension in the Middle East, Africa, South Asia and the Korean Peninsula, new "hot spots", zones not controlled by the government of any State, are expanding. **The territories of armed conflicts are a source for spreading terrorism**, ethnic hatred, religious hatred, and other manifestations of extremism. The emergence of a terrorist organization, the self-proclaimed "Islamic state", and the strengthening of its influence are the result of the policy of double standards, which some States follow in their fight against terrorism].

Mikhail Gorbatchev's analysis

"We were ready to build a new security architecture for Europe. But after the breakup of the Soviet Union and the end of the Warsaw Pact, NATO forgot all its promises. It became more of a political than a military organization. NATO decided it would be an organization that intervenes anywhere on "humanitarian grounds." We have by now seen intervention not only in Yugoslavia, but in Iraq — intervention without any mandate or permission from the United Nations. Americans have treated us without proper respect. Russia is a serious partner. We are a country with a tremendous history, with diplomatic experience. It is an educated country that has contributed much to science. The Soviet Union used to be not just an adversary but also a partner of the West. There was some balance in that system. "

The view from George Kennan, alias Mr. X, the father of “containment”

“Expanding NATO would be the most fateful error of American policy in the entire post-cold-war era. Such a decision may be expected to inflame the nationalistic, anti-Western and militaristic tendencies in Russian opinion; to have an adverse effect on the development of Russian democracy; to restore the atmosphere of the Cold war to East-West relations, and to impel Russian foreign policy in directions decidedly not to our liking.”

The New York Times, 1997

The view from John Mattlock, the last US Ambassador to the USSR

JACK MATLOCK JR.: *"Well, I think that what we have seen is a reaction, in many respects, to a long history of what the Russian government, the Russian president and many of the Russian people—most of them—feel has been a pattern of American activity that has been hostile to Russia and has simply disregarded their national interests. They feel that having thrown off communism, having dispensed with the Soviet Empire, that the U.S. systematically, from the time it started expanding NATO to the east, without them, and then using NATO to carry out what they consider offensive actions about an—against another country—in this case, Serbia—a country which had not attacked any NATO member, and then detached territory from it—this is very relevant now to what we're seeing happening in Crimea—and then continued to place bases in these countries, to move closer and closer to borders, and then to talk of taking Ukraine, most of whose people didn't want to be a member of NATO, into NATO, and Georgia. Now, this began an intrusion into an area which the Russians are very sensitive. Now, how would Americans feel if some Russian or Chinese or even West European started putting bases in Mexico or in the Caribbean, or trying to form governments that were hostile to us? You know, we saw how we virtually went ballistic over Cuba. And I think that we have not been very attentive to what it takes to have a harmonious relationship with Russia."*

Conclusions

- Russia's new land attack missiles are by no means a surprise; they had been advertised on Arms shows since Abu Dhabi IDEX 1993. Their conception dates back from the 1980s when the USSR was trying to develop universal missiles with an analog to the US conventional TOMAHAWK.
- With a shrinking fleet and financial and technical difficulties (gas turbines), Russia is starting a major life extension program that will allow 30 years old surface and submarine platforms to live another 15 years and carry as many as 20 to 80 VLS. At the same time, Russia is accelerating the production of corvettes fitted with 8 missiles each and KILO submarines for the Pacific Fleet (6 units).
- Although the Russian Navy is obsolescent, this massive re-equipment constitutes a "game changer" and a significant challenge for Western navies. Despite its comfortable advantage of 80 AEGIS platforms, the USN should cancel the plan to transform the inappropriate L(C)S into a frigate. The USN should actually get some inspiration from the well armed Russian new corvettes.
- Despite its apparent alignment with China, Russia contributes through its technology transfers to India and through its sales of supersonic missiles to Vietnam and a lesser extent Indonesia to contain China's naval rise
- Yet, despite the fact that Russia is challenging Western forces in the air and on the high seas, Moscow still calls the Western nations "partners" and enmity is not inevitable.
- The attendees may ask themselves if they have ever read the various Russian military and maritime doctrines issued in 2000, 2001, 2009, 2010 and 2015. If not, they can understand the roots of the problems with Russia: despite very specific warnings and strategic messaging by Russia in extensive papers unheard of in Soviet times, the West did not pay any attention to Russia's strategic concerns over NATO's eastern expansion.