MODERNISATION OF INDIAN NAVY: BUDGETARY AND PROCUREMENT CONSTRAINTS

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ABSTRACT

The Indian Navy (IN) is on a course of major modernisation process. A large number of ships, submarines and aerial platforms are in the process of induction with several more such items being in the acquisition planning process. However, the success of IN's modernisation drive hinges upon two critical elements: adequate supply of resources and an efficient procurement process. Of late, IN has come under tremendous financial pressure, with very little scope for signing new contracts. This along with frequent controversies surrounding purchase of military items from foreign countries, is a major obstacle that the IN has to fight in its modernisation drive.

Keywords: Modernisation; Procurement; Contracts; Indian Navy

MODERNIZAÇÃO DA MARINHA DA INDIA: RESTRIÇÕES ORÇAMENTÁRIAS E DE AQUISIÇÕES

RESUMO

Na Marinha da Índia está em curso um grande processo de modernização. Um grande número de navios, submarinos e aeronaves estão em avaliação ou em processo de planejamento para aquisição. No entanto, o sucesso dos esforços de modernização dependem de dois elementos críticos: oferta adequada de recursos e processo de compras eficiente. Ultimamente, a Marinha Indiana tem estado sob grande pressão orçamentária, o que reduz o espaço para a assinatura de novos contratos. Isso, conjuntamente com freqüentes polêmicas que envolvel a compra de equipamentos militares de países estrangeiros, é um grande desafio que a Marinha da Índia tem que vencer em seu esforço de modernização.

Palavras-chave: Modernização; Aquisições; Contratos; Marinha Indiana

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MODERNISATION OF INDIAN NAVY: THE CONTEXT

India has vast maritime borders encompassing a long coast line of 7516.6 km, 1197 island territories and Exclusive Economic Zone (EEZ) of 2.01 million km^2.[2] There is a growing realisation that the tranquillity at sea is vital for the country's economic growth. To put the economic aspect of the maritime security in perspective, more than 90 per cent of India's trade by volume and 77 per cent by value are transported over the seas, and over 97 per cent of India's oil requirements are either imported or produced in offshore fields.[3]

The Indian Navy (IN), the fifth-largest maritime force in the world, is responsible for protecting India's maritime interests, the planning and operational aspects of which are constantly shaped and triggered by not only India's domestic resource and other constraints but also by a range of externalities such as geo-politics, geo-economics, emerging technologies, changing nature of unconventional threats and evolving capabilities of India's maritime neighbourhood.

Of late, particularly after the 2008 seaborne terrorist attacks in Mumbai, the IN has been made responsible for India's overall maritime security including for costal and off-shore areas. Being a major force in the Indian Ocean Region (IOR), the IN has also been involved in enforcing international law, particularly in combating piracy, which has been a source of major concern in the IOR. Since October 2008, the IN has deployed at least one ship off the Gulf of Aden, in a trilateral effort coordinated with the maritime forces of China and Japan.[4] The IN is also increasingly looked upon as a vital instrument of country's foreign policy and diplomacy, requiring India's premier maritime force to project power beyond shores; foster partnership through maritime capability; build trust and create interoperability through bilateral and multilateral exercises and operations; and provide international humanitarian and disaster relief.[5]

While the above operational and security environment remains a priority for IN's force modernisation, its biggest and long term challenges

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[2] Indian Navy, *Indian Maritime Doctrine,* 2009, p. 62.

[3] INDIA. Ministry of Defence. Government of India. *Annual Report 2011-12. 2012*, p. 34.

[4] FAREWELL Press Conference by Outgoing CNS. *Indian Navy.* Aug. 07, 2012

[5] FREEDOM to use the Seas: India's Maritime Military Strategy. *Indian Navy,* [s.d.]. p. 11.

are however the navies of India's maritime neighbours, particularly China which has made great stride in its naval built up and shown tremendous capability by flexing its reach far beyond its shore. China's recent launch of first aircraft carrier, deployment of dozens of submarines (including nuclear powered submarines) and anti-ship cruise missiles, participation in anti-piracy operations in IOR, and most importantly its ingress into IOR through a network of ports in countries like Pakistan, Bangladesh, Myanmar and Sri Lanka - are all indicative of Beijing's increasing naval ambition.

In order to meet the myriad of challenges, the IN has endeavoured to modernise its force level into what is described by its 2006 Vision Document a "three dimensional, technology enabled and networked force" capable of performing tasks ranging from "LIMO [Low Intensity Maritime Operations] to conventional war fighting to nuclear deterrence."[6] Noticeable achievements has been achieved by the IN in its modernisation drive which is evident from its all round growth. In the following are mentioned the key modernisation programmes undertaken in two critical areas – warships and air assets –their progress achieved. Also discussed are the two key challenges (related to budget and procurement) facing the IN in its modernisation drive.

MODERNISATION: AN OVERVIEW

SHIPS AND SUBMARINES

The IN has come a long way since Independence when it was a minor maritime force with a small flotilla of 30-odd ships comprising of two frigates, four sloops, one corvette and few yards and crafts.[7] By January 2013, the force level has grown to 132 ships and submarines, including an aircraft carrier, one nuclear and 14 conventional submarines, eight destroyers, 15 frigates and 20 corvettes. However, the above number falls short of the minimum force level of 140 ships which the Defence Acquisition Council (DAC), the highest decision making body in the Ministry of Defence (MoD), had directed the IN to have. To fill up the gap, the IN has undertaken a massive modernisation process with several ships and submarines being

[6] THE INDIAN Navy's Vision Document. *Indian Navy*, May, 2006.

[7] 2011: the year that was. *Indian Navy*, 2011. Disponível em: <http://indianIN.nic.in/sites/default/files/year-gone-by-2011.pdf>. Acesso em: 15 jan. 2013.

in the induction process. Among others, the IN is all set to induct 54 new ships and submarines for which it has already awarded contracts. These include two new aircraft carriers, three nuclear submarines, six conventional submarines, seven destroyers, eight frigates, four anti-submarine warfare corvettes, eight naval offshore patrol vessels (NOPV), eight landing craft utility (LCU), three cadet training vessels and five hydro-graphic survey vessels. In addition, the IN has also got the approval of the MoD for 10 more ships and submarines (six conventional submarines with air-independent propulsion technology and four landing platform docks); and is also believed to be negotiating for three more frigates and eight mine counter measure vessels (MCMV) (See Annexure).

AIR ASSETS

Although less intense in comparison with warships, the IN has nonetheless undertaken a decent level of modernisation of its air assets, including fighter aircraft, surveillance aircraft, and helicopters. As part of the 2004 Gorshkov aircraft carrier agreement, India also signed a deal to buy 16 MiG-29 fighters (12 single-seat MiG-29Ks and four two-seat MiG-29KUBs) to operate from the carrier. The delivery of all fighters was completed in 2011, and they were formally commissioned into the IN's "Black Panthers" squadron based in the western coastal state of Goa in May 2013.[8] Equipped with Beyond Visual Range (BVR) and guided anti-ship missiles and smart bombs, these 4+ Generation multirole fighter jets will eventually operate from INS Vikramaditya when it is delivered in late 2013. To further strengthen the carrier based war fighting capability, the IN also signed in 2010 another deal worth $1.5 billion to procure additional 29 MiG-29Ks from Russia. The first lot of four fighters of the second contract was delivered in December 2012, with seven expected for delivery in 2013.[9]

With a large coastline and distant island territories, maritime reconnaissance has assumed higher priority, especially post 2008 Mumbai attacks that exposed the country's vulnerability to such threats. Within months of the attack, India signed in January 2009 what then

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[8] INDIA. Ministry of Defence. Government of India. IN Stamps blue Water Presence Across IOR, bolsters Capacity with Induction of MIG-29k, INS Shivalik. *Indian Navy*, Feb. 19, 2010.; FERNANDES, Krish. Indian Navy commissions MiG-29K fighter jets. The Times of India, May 11, 2013.

[9] RUSSIA to ship 7 MiG-29 jet fighters to India in 2013. *Interfax,* Feb. 05, 2013. Disponível em: <http://www.interfax.com/newsinf.asp?id=393328>. Acesso em: 15 jan. 2013.

become the biggest ever contract with the US. Valued at $2.14 billion, the contract was signed with Boeing for eight P-8I Long Range Maritime Reconnaissance (LRMR) aircraft, with the delivery period between 2013 and 2015.[10] The first plane arrived in India in May 2013.[11] Two more are to be flown to India by end of 2013.[12] However with an ageing fleet of Russian Tupolev-42 and Ilyushin-38 Sea Dragon aircraft, there is also a need felt by IN to go for a comprehensive modernisation of its maritime reconnaissance fleet of aircrafts. The IN has already got the clearance of the Indian government to go for a repeat order of four more P-8Is from Boeing although there has been some delay in placing the order. Besides, the IN is believed to be processing the acquisition of 12 more LRMR aircrafts, the type and source of which will be only known the coming years.

Besides the long-range maritime aircraft, the IN has also subtly bolstered its fleet of UAVs, to enhance its coastal surveillance capability. After Kochi - which hosts IN's first UAV squadron since 2006- the second UAV squadron was commissioned in 2011 at Porbandar in western state of Gujarat. Initially with four Israeli UAVs – two Searcher Mk-II and two Herons – the squadron, the first under the Western naval command will help IN to "patrol the northern portion of Arabian Sea, sea lanes from the Gulf and provide surveillance cover to high-value assets on India's western coast."[13] The third squadron was commissioned one year later in Ramanathapuram district of eastern state of Tamil Nadu. Besides the above three, IN is also reportedly planning to commission one more UAV squadron at Port Blair in the Andaman and Nicobar islands.[14]

Like the fighter and reconnaissance fleet, the helicopter fleet of the IN is also going through a mass modernisation process. Acquisition worth nearly $10 billion for as many as 192 helicopters is presently at various stages of progress. In September 2008, the IN issued the $1.0 billion tender for 16 multi role helicopters to replace its ageing Sea King helicopters which

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[10] INDIA. Ministry of Defence. Government of India. Year-end review 2009. *Indian Navy*, Dec. 29, 2009.

[11] INDIA. Ministry of Defence. Government of India. Arrival of First Indian Naval P-8I LRMRASW Aircraft at INS Rajali, *Indian Navy*, May 15, 201

[12] BOEING Delivers 1st P-8I Maritime Patrol Aircraft. Boeing, Dec. 20, 2012. Avaiable: <http://www.boeing.co.in/News-and-Media-Room/News-Releases/2012/December/*Boeing*-Delivers-1st-P-8I-Maritime-Patrol-Aircraft>. Acesso em: 15 jan. 2013.

[13] UAV squadron to guard Gujarat coast. The Indian Express, Jan. 18, 2011.; EYE in the sky to guard Gujarat coast. *The Times of India,* Jan. 18, 2011.

[14] SPY drones to be deployed on Tamil Nadu coast on Wednesday. *The Times of India*, April 12, 2012.

were inducted in 1980s.[15] The US-based Sikorsky's S-70B is competing with European consortium NHIndustreis's MH-60 Romeo in the tender, which is now at final stage of selection. The multi-role helos tender was followed by another tender issued in August 2011 for 56 utility helicopters for replacing HAL-built Chetaks which the IN is flying for nearly 40 years. The tender, estimated to cost around one billion dollar, has been issued to all major global companies including Boeing, Bell, Sikorsky, Kamov, Eurocopter and Agusta Westland.[16] The acquisition of above helicopter is however overshadowed by another tender to procure as many as 120 multi-role helicopters at an estimated value of nearly eight billion dollars.[17] However the formal tender is yet to be issued.

BUDGETARY PROVISIONS AND CONSTRAINTS

Adequacy of resources and their timely utilisation is key to modernisation of armed forces and the IN is no exception. However as far as resource allocation is concerned the IN does not enjoy the priority that the Army or Air Force gets in the annual defence budget. Among the three services, the IN has the least share. In 2013-14, it was allocated Rs. 363.4 billion (approximately US$ 6.7 billion), amounting to 18 per cent of total defence budget. Although the present share is more than double than in early eighties, it still remains much below the 30 per cent of total defence budget as suggested by the 10th Finance Commission.[18] In addition to the lowest share in defence budget, the IN also invariably gets lower allocations than its projected requirement. During the seven year period from 2007-08 to 2013-14, IN's total allocation was Rs 455.2 billion (21 per cent) short of its total projection of Rs 2216.9 billion.

The least share in defence budget and lower than budgetary requirement have however not deterred the IN from better exploiting the available resources to modernise its force level. This is evident from the ratio of revenue expenditure and capital expenditure being shifting towards the latter. In 2012-13, the IN had a whopping 66 percentage

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[15] INDIA to go for open bidding for IN deal, rejects US offer. *The Economic Times*, Feb. 18, 2011.

[16] RAJAT Pandit, IN to buy 56 utility helicopters for $1 bn. *The Times of India*, Aug. 11, 2011.

[17] IN plans to issue bid for over 120 multirole choppers. *The Indian Express*, Jan. 28, 2013.

[18] STANDING Committee on Defence, 12th Lok Sabha, Upgradation and Modernisation of Naval Fleet, 3rd Report. Lok Sabha Secretariat: New Delhi, 1998. p. 5

of its budget devoted for capital expenditure (the comparable figures for Army and Air Force are 20 per cent and 63 per cent, respectively). Among the three services, the IN has also the maximum utilisation of the modernisation budget, having overspent the allotted resources in three consecutive years up to 2011-12 (the Army and the Air Force have both surrendered their modernisation budget in this time period)

The IN's appetite for resources to sustain its modernisation drive is bound to increase manifold in the coming years, as contracts of voluminous proportion are in the pipeline. In the 11th plan (2007-2012), the IN was successful in obtaining the approval of the MoD for about 200 contracts worth Rs. 2730.7 billion. Of these, 161 contracts worth Rs. 920.7 billion have been concluded during the plan period. The remaining 39-odd contracts with a staggering financial value of Rs. 1810.1 billion are planned for execution in the 12th Plan (2012-2017). The success of executing these remaining contracts would however depend as much on India's defence procurement systems as on resource availability.

As regards resource availability, there is already a sign of pressure owning to a depressing economic environment. Unlike in the past, the Indian economy in recent years has shown signs of fragility. The GDP growth for 2012-13 is expected to be just five per cent - down from the peak of 9.3 per cent registered few years ago.[19] To cope with the economic slowdown the government has moved on a fiscal austerity path, with the defence spending coming under stress. For instance, the defence budget of 2012-13 has already been revised downward by 7.7 per cent from the initial allocation, resulting in a reduction of Rs. 149.1 billion. For 2013-14, the allocation was increased by a modest 5.3 per cent which is not only below the prevailing inflation rate but also pales in comparison to hefty growth rates of 17.6 per cent and 11.6 per cent in the previous two budgets.

With the defence budget coming under pressure, the resource crunch of the IN has become intense. For 2013-14, IN was allocated Rs 234.79 billion for modernisation which is less than the amount allocated in the previous budget. The decrease in the modernisation budget comes at a time when the IN has a very high rate of committed liabilities (arising out of contracts already signed) and needs more resources for signing new contracts (Table). So the writing on the wall is that if substation additional resources do not come forth, the modernisation which the IN intends to pursue in the coming years is bound to suffer.

[19] INDIA. Ministry of Finance. Government of India. *Economic Survey* 2012-13.2012. p. 2.

Table: IN's Modernisation Expenditure: Committee Liabilities and New Schemes

Year	Capital Acquisition (Rs in billion)	New Schemes (Rs in billion)	Committed Liabilities (Rs in billion)	% Share of New Schemes	% Share of Committed Liabilities
2007-08	85.67	4.64	81.03	5.42	94.58
2008-09	89.60	3.11	86.48	3.48	96.52
2009-10	128.30	25.74	102.55	20.06	79.94
2010-11	162.87	54.22	108.65	33.29	66.71
2011-12	158.61	9.00	149.61	5.67	94.33
2012-13	237.75	9.21	228.54	3.87	96.13
2013-14	230.68	4.51	226.17	1.96	98.04

Source: Author's database

PROCUREMENT CONSTRAINTS

Apart from the budgetary constraints, IN's modernisation also suffers due to various procurement-related problems. Be it ships, submarines or any other platform, procurement schedule often face huge time overrun, sometimes running into decades. The delays occur due to several reasons, ranging from protracted decision-making process, to non-adherence to the contractual obligations by foreign suppliers, long-build period taken by the shipyards and controversy surrounding the procurement. Various oversight agencies including the Parliamentary Standing Committee on Defence and the Comptroller and Auditor General of India (CAG), have repeatedly highlighted some of above problems in their respective reports. For instance, in a recent report, the CAG has noticed time overrun of four to five years in three indigenous warship projects - P15A (Destroyer), P17 (Frigate) and P28 (ASW Corvettes).[20] The delay in procurement is

[20] COMPTROLLER and Auditor General of India, Performance Audit of the Indigenous Construction of Indian Naval Warships, *Report,* n. 32 of 2010-11. p. III-IV

perhaps best exemplified in IN's efforts to replace its two ageing aircraft carriers, one of which has already been decommissioned in 1997 and other is 'running on borrowed time'. It is noteworthy that although the carrier replacement plan dates back to mid-1980s, over 35 years later, the IN is yet to induct any new carrier. The acquisition of Gorshkov aircraft carrier from Russia, for which an Inter Government Agreement was signed in October 2004, has met with inordinate delay. The delivery schedule has been revised several times from the original contractual date of August 2008 to now late 2013 (the cost of acquisition has also been revised upward). The indigenous aircraft carrier, which is being built by the state-owned Cochin Shipyard Ltd (CSL) is already eight years behind schedule and now expected to join the IN in 2018 (the government's sanction for construction of carrier was given in 1999, and it was expected that time the ship would join the IN in 2009-10).[21]

To overcome some of the deficiencies in the procurement process, the MoD has nonetheless endeavoured to reform its acquisition rules as enshrined in the Defence Procurement Procedure (DPP). Since its first articulation in 1992, it has gone through seven major rounds of revision, with the latest one being carried out in June 2013.[22]Among others, the DPP has incorporated a set of dedicated rules for warship acquisition, and making provisions for faster procurement. These reform measures are although credible, the IN, like its sister services, still faces a major crucial hurdle coming from frequent corruption allegations that often come in the way of armed forces' modernisation process. The latest such allegation is related to the procurement of 12 VVIP helicopters from AgustaWestland, in which bribes were allegedly paid to officials, including a former chief of Indian air force, to secure the deal. Pending the final investigation reports, the MoD has already "initiated action for cancellation of contract".[23] If the Agusta Westland is blacklisted, it would derail IN's two major helicopter projects (16 multi role and 56 utility) in which the Italian company is one of the two bidders in each project. This is least that IN would like to face at the moment in its modernisation drive.

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[21] STANDING Committee on Defence, 15th Lok Sabha, *Demands for Grants 2011-12*. Lok Sabha Secretariat: New Delhi, 2012. p. 24.

[22] BEHERA, Laxman K Amendments to DPP-2011: an analytical overview. *IDSA Issue Brief*, May 06, 2013, Disponível em: <http://www.idsa.in/system/files/IB_Amendments_LKBehera.pdf>. Acesso em: 15 jan. 2013.

[23] INDIA. Ministry of Defence. Government of India. *MoD Begins Process of Cancellation of AgustaWestland Helicopter Contract*. Feb. 15, 2013.

CONCLUSION

To cope with the myriad maritime challenges, the IN, the fifth maritime force in the world, has undertaken a massive modernisation process. The force level of the IN, which now comprises of 132 ships and submarines besides several state-of-the-art aerial platforms, is poised further to increase in the coming years with several big projects being in the pipeline. However the timely induction of new platforms would depend as much on steady flow of resources as on efficiency of the procurement system. The IN is already under the budgetary pressure and some of its projects are caught in controversy over the corruption charges. Overcoming these challenges will be key to IN's modernisation success in the coming years.

ANNEXURE

INDIAN IN' RECENT AND PLANNED ACQUISITION OF WARSHIPS

Type	Shipyard	Project/Name	No of Ships	Remarks
Aircraft Carrier	Cochin Shipyard Ltd	Air Defence Ship	01	Delay in construction; Launch expected in August 2013 and delivery in 2018.
Aircraft Carrier	Sevmash	Project 11430 - INS Vikramaditya	01	Significant time and cost overruns. Delivery schedule revised from August 2008 to December 2012 and then to late 2013. Price escalation from $974 million to $2330 million. The dely in deliver of Gorshkov had postponed the operational life of INS Viraat till 2016.
Submarine	Shipbuilding Centre (SBC), Visakhapatnam	Advanced Technology Vessel (ATV)	03	INS Arihant is part of Rs 300 billion project to construct 03 SSBN class submarines. The first sub, lunched in July 2009, is likely to be inducted by 2014.

Submarine	Amur Shipbuilding Plant, Komsomolsk-on-Amur	INS Chakra	01	INS Chakra, an Akula-II class SSGN, is leased from Russia for 10 years. The submarine was inducted into IN on April 04, 2012.
Submarine	MDL	P 75	06	Slippage in delivery of first submarine from original schedule of December 2012 to June 2015. The delivery of last submarine is planned in September 2018 as against the original target of December 2017. The cost overrun from Rs. 187.98 billion to Rs 235.62 billion.
Submarine	MDL	P 75(I)	06	AoN for about $10 billion project was accorded by DAC 'just before' IN Day on Dec 04, 2012. RFP expected by March 2013.
Destroyer	MDL	Project 15A (Follow-on Delhi Class Destroyer)	03	Nearly two years of delay over the revised date of delivery. Expected delivery of first ship was March 2012, followed the other two in March 2013 and March 2014, respectively.
Destroyer	MDL	Project 15-B (Follow on of P 15A)	04	Rs 293.25 billion contract signed in January 2011. Delivery of First ship expected in 2018, followed by three more in one year intervals.
Frigate	Yantar Shipyard, Kaliningrad, Russia	Project 1135.6 (follow-on Talwar class)	03	INS Teg, and INS Tarkash, the first and second ships of the project, were commission into IN on April 27, 2012 and November 09, 2012, respectively. INS Trikhand, the 3rd ship is likely to be inducted in mid-2013.
Frigate	MDL	Project 17	03	Three Shivalik class stealth frigates – Shivalik, Satpura and Sahyadri – were inducted into IN on 29 April 2010, 09 July 2011 and July 2012, respectively.

Frigate	MDL & GRSE	Project 17-A	07	Four ships to be constructed by MDL and three by GRSE at a total project cost of Rs 450 billion.1 Delivery of first ship expected in 2017, followed by one each till 2023.
ASWC	GRSE	Project-28	04	Project sanctioned in March 2003 at the cost of Rs. 30.51 billion. The proposed cost overrun is 161 per cent. Over four years of delay in project delivery. The first ship is expected to be delivered in end-2013.
Frigate			03	The project reportedly under discussion with the Russian authorities.
Landing Platform Dock (LPD)	Lockheed Shipbuilding Company	INS Jalashwa	01	The ship was commissioned into the IN in June 2007.
Landing Platform Dock (LPD)			04	Acceptance of Necessity given in 2010. RFP yet to be floated.
Fleet Tanker	Fincantieri		02	INS Deepak and INS Shakti were inducted in the IN on January 21, 2011 and October 01, 2011, respectively.
NOPV	GSL		04	The first ship, INS Saryu, commissioned in January 2013. The next three are to be delivered by mid-2014.
NOPV	Pipavav		05	Rs 29.75 billion contract signed in May 2011.
LCU	GRSE		08	Rs 21 billion contract signed in September 2011. The first ship is expected to be delivered in three years.
MCMV	Kangnam Corp (S. Korea)/GSL		08	The project estimated at Rs 60 billion is at commercial negotiation stage. Initial reports suggest two ships

				will be constructed at Korean shipyard followed by six more by GSL through technology transfer.
Cadet Training Vessel	ABG Shipyard		03	Rs 14.55 billion contract signed in two phases: in June 2011 for two vessels and a repeat order in December 2012. The first vessel is expected for delivery in early 2014.
Catamaran	Alcock Ashdown		06	After a delay of over one and a half years, the first hydrographic survey ship, INS Makar, was commissioned in September 2012.
Sail Training Ship	GSL		01	The ship was commissioned on January 27, 2012.
WJFAC	GRSE		10	Rs 5.14 billion project. All delivered. The last ship, INS Karuva, commissioned in August 2011.

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