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AIRCRAFT CARRIERS

Notes: [1] The former Russian aircraft carrier Mirak is a tourist attraction at Shenzhen. [2] Building of an indigenous aircraft carrier (possibly Type 089) is expected to start by 2018 with a view to entering service in about 2025.

1 KUZNETSOV (OREL) (PROJECT 1143.5/6) CLASS (CVGM)

<table>
<thead>
<tr>
<th>Name</th>
<th>No</th>
<th>Builders</th>
<th>Laid down</th>
<th>Launched</th>
<th>Commissioned</th>
</tr>
</thead>
<tbody>
<tr>
<td>LIAONING (ex-Varyag; ex-Relga)</td>
<td>16</td>
<td>Nikolayev South</td>
<td>6 Dec 1985</td>
<td>6 Dec 1988</td>
<td>25 Sep 2012</td>
</tr>
</tbody>
</table>

Displacement, tonnes: 46,637 standard; 59,439 full load
Dimensions, metres (feet): 304.5 x 280 x 70; 37 x 10 x 5.9 (995 x 918 x 229.7; 121 x 4 x 34.5)
Flight deck, metres: 304.5 x 70 (995 x 229.7)
Speed, knots: 30
Range, n miles: 3,850 at 29 kt, 5,500 at 18 kt
Complement: 1,860 (200 officers; 626 air crew) + 40 flag staff
Machinery: 8 boilers; 4 turbines; 200,000 hp (147 MW); 4 shafts
Guns: 2 x 30 mm Type 1030; 10 barrels per mounting; 4,200 rounds combined to 1.5 km.
A/S Mortars: 2 RBU 6000
Physical countermeasures: Decoys: 4 Type 726 chaff launchers
Electronic countermeasures: ESM/ECM: To be announced.
Radars: Air search: Type 381B Top Plate (Fregate MAE-3) 1 (3D, E/F-band).
Air search/fire control: Type 346 (Dragon Eye) 1 (3D; G-band).
Surface search: To be announced.
Fire control: 2 Band Stand (Mineral ME) 1 (l-band).
Navigation: To be announced.
Tacan: To be announced.
IFF: To be announced.
Sonars: To be announced.
Weapon control systems: To be announced.
Helicopters: To be announced.
Programmes: Procurement of an aircraft carrier capability has been a high priority for the Chinese Navy since the 1990s. Ex-Varyag, the second of the Kuznetsov class (the first of class, Admiral Kuznetsov, remains in service in the Russian Navy) was between 70 and 80 per cent complete by early 1993 when building was terminated after an unsuccessful attempt by the Russian Navy to fund completion. Subsequently the ship was bought by China and, having been towed through the Bosporus on 2 November 2001, arrived at Dalian in March 2002. Once the ship emerged from dock in mid-2006 painted in military colours, it became clear that it was intended to bring the ship into operational service. Work in 2006 included the application of a non-skid surface to the flight deck and, by mid-2008, the exterior of the ship was looking relatively shipshape. The ship was moved to a dry-dock on 27 April 2009 for a refit during which shafts and/or propellers are likely to have been fitted. Other work included substantial rebuild of the upper island structure which has involved installation of the Dragon Eye radar. The work was completed in mid-March 2010 when the ship was moved out of dock to a degaussing berth. Meanwhile a full-scale replica of the flight deck at Wuhan became available for flight-deck training. Structure: The hangar is 183 x 25.4 x 7.5 m and can hold up to 18 Flanker aircraft. There are two starboard side lifts, a ski jump of 14° and angled deck of 7°. There are four arrester wires. The ship has some 16.5 m of freeboard. The FL-3000N launchers are sited on sponsons fore and aft and the Type 730 CIWS are on the port and starboard quarters.
Operational: Initial sea trials started on 10 August 2011 and the ship returned to Dalian after four days. A further docking period followed during which the flight-deck was stripped and repainted. It is not known whether there were other problems that required a docking. Between November 2011 and August 2012, nine sets of sea trials, culminating in a 25-day period in July 2012, were carried out. Subsequently, the ship was handed over to the PLAN on 23 September 2012 and formally commissioned on 25 September 2012. While the ship is now capable of limited operations, its initial role is likely to be as an aviation training ship with a view to working the ship up to a full aircraft carrier capability in due course. This is expected to last at least a year. A significant step in this process was the successful recovery of a J-15 aircraft on 20 November 2012. The ship arrived at her base at Dachu Shan on 27 February 2013.
**11 OYASHIO CLASS (SSK)**

<table>
<thead>
<tr>
<th>Name</th>
<th>No</th>
<th>Builders</th>
<th>Laid down</th>
<th>Launched</th>
<th>Commissioned</th>
</tr>
</thead>
<tbody>
<tr>
<td>MICHIASHI</td>
<td>SS 581</td>
<td>Mitsubishi, Kobe</td>
<td>16 Feb 1995</td>
<td>18 Sep 1997</td>
<td>10 Mar 1999</td>
</tr>
<tr>
<td>MAKISHO</td>
<td>SS 583</td>
<td>Mitsubishi, Kobe</td>
<td>26 Mar 1997</td>
<td>22 Sep 1999</td>
<td>29 Mar 2001</td>
</tr>
<tr>
<td>TAKASHI</td>
<td>SS 587</td>
<td>Mitsubishi, Kobe</td>
<td>30 Jan 2001</td>
<td>1 Oct 2003</td>
<td>9 Mar 2005</td>
</tr>
<tr>
<td>MOCHISHIO</td>
<td>SS 600</td>
<td>Kawasaki, Kobe</td>
<td>23 Feb 2004</td>
<td>6 Nov 2006</td>
<td>6 Mar 2008</td>
</tr>
</tbody>
</table>

**Displacement**: 2,794 surfaced; 3,565 dived

**Dimensions, metres (feet)**: 71.7 × 7.9 × 6.9 (235 × 26 × 22.8)

**Machinery**: Diesel-electric; 2 Kawasaki 12V25S diesels; 5,520 hp (4.1 MW); 2 Kawasaki alternators; 3.7 MW; 2 Toshiba motors; 7,750 hp (5.7 MW); 1 shaft

**Missiles**: SSM: McDonnell Douglas Sub-Harpoon; active radar homing to 130 km (70 n miles) at 0.9 Mach; warhead 227 kg.

**Torpedoes**: 6—21 in (533 mm) tubes; Type 89; wire-guided; active/passive; homing to 50 km (27 n miles); 38 km (21 n miles) at 40/55 kt; warhead 267 kg and Type 80 ASW.

**Sonars**:
- **Electronic countermeasures**: ESM: NZLR-1B; radar warning.
- **Radar**: Surface search; JRC ZPS 6; very low frequency.
- **Sonars**:
  - Hughes/Oki ZQQ 6; hull and flank arrays; active/passive search; medium/low frequency. Towed array; passive search; very low frequency.
  - Hughes/Oki ZQQ 5B; hull-mounted; active/passive search and attack; medium/low frequency. Towed sonar and wireless aerials, as well as anechoic tiles on the fin. A new type of deck casing in 2013.

**Structure**:
- The slight growth in all dimensions is a natural evolution from the Yuushio class and includes more noise reduction, towed sonar and wireless aerials, as well as anechoic coating. Double hull construction. Asashio had a slightly larger displacement on build and a small cutback in the crew as a result of greater systems automation for machinery and steering control. The hull was extended in 2001 to accommodate an AIP module (Stirling engine) which was fitted by Mitsubishi, Kobe. Diving depth 650 m (2,130 ft).

**Programmes**:
- First of a new class approved in the 1993 budget and then one a year up to FY03.
- Structure: Fitted with large flank sonar arrays which are reported as the reason for the increase in displacement over the Harushio class. Double hull sections forward and aft and anechoic tiles on the fin. A new type of deck casing in 2013. First approved in 1986 estimates and then one a year up to FY03.
- **Programmes**:
  - First of a new class approved in the 1993 budget and then one a year up to FY03.
  - Structure: Fitted with large flank sonar arrays which are reported as the reason for the increase in displacement over the Harushio class. Double hull sections forward and aft and anechoic tiles on the fin. A new type of deck casing in 2013. First approved in 1986 estimates and then one a year up to FY03.

---

**10/2012*, Hachiro Nakai / 1482870**

**ISOSHI**

7/2010, Jin Tetsuya / 1366880

---

**2 HARUSHIO CLASS (SSK)**

<table>
<thead>
<tr>
<th>Name</th>
<th>No</th>
<th>Builders</th>
<th>Laid down</th>
<th>Launched</th>
<th>Commissioned</th>
</tr>
</thead>
</table>

**Displacement, tonnes**: 2,489 (TSS 3607), 2,947 (TSS 3601) surfaced; 2,351 (TSS 3607), 2,759 (TSS 3601) dived

**Dimensions, metres (feet)**: 65.2 × 7.8 × 6.4 (215 × 25.6 × 21.1)

**Machinery**: Diesel-electric; 2 Kawasaki 12V25/25S diesels; 5,520 hp (4.1 MW); 2 Kawasaki alternators; 3.7 MW; 2 Fuji motors; 7,200 hp (5.3 MW); 1 shaft; 4 Stirling engines

**Missiles**: SSM: McDonnell Douglas Sub-Harpoon; active radar homing to 130 km (70 n miles) at 0.9 Mach; warhead 227 kg; depth 29.2 m (95 ft); warhead 267 kg and Type 80 ASW. Total of 20 SSM and torpedoes.

**Sonars**: Hughes/Oki ZQQ 6; hull and flank arrays; active/passive; homing to 50 km (27 n miles); 38 km (21 n miles) at 40/55 kt; warhead 267 kg; depth 650 m (2,130 ft).

**Structure**:
- The slight growth in all dimensions is a natural evolution from the Yuushio class and includes more noise reduction, towed sonar and wireless aerials, as well as anechoic coating. Double hull construction. Asashio had a slightly larger displacement on build and a small cutback in the crew as a result of greater systems automation for machinery and steering control. The hull was extended in 2001 to accommodate an AIP module (Stirling engine) which was fitted by Mitsubishi, Kobe. Diving depth 650 m (2,130 ft).

**Programmes**:
- First approved in 1986 estimates and then one a year up to FY03.
- Structure: Fitted with large flank sonar arrays which are reported as the reason for the increase in displacement over the Harushio class. Double hull sections forward and aft and anechoic tiles on the fin. A new type of deck casing in 2013. First approved in 1986 estimates and then one a year up to FY03.

**Programmes**:
- First approved in 1986 estimates and then one a year up to FY03.
- Structure: Fitted with large flank sonar arrays which are reported as the reason for the increase in displacement over the Harushio class. Double hull sections forward and aft and anechoic tiles on the fin. A new type of deck casing in 2013. First approved in 1986 estimates and then one a year up to FY03.
Solomon Islands

Country Overview

Formerly a British protectorate, the Solomon Islands gained independence in 1978. Its head of state is the British sovereign, who is represented by a Governor-General. Situated in the southwest Pacific Ocean, east of New Guinea, the country comprises more than 35 islands and numerous atolls which extend some 650 n miles from east to west and includes most of the Solomon Islands group. The six main islands are: Guadalcanal, Malaita, New Georgia, San Cristobal (now Makira), Santa Isabel and Choiseul. Vella Lavella, Ontong Java, Rennell, Bellona and the Santa Cruz islands are also part of the group, together with the Florida, Russell, Rennell and Duville island groups. Honiara, on Guadalcanal, is the capital and principal port. An archipelagic state, territorial seas (12 n miles) are claimed. An Exclusive Economic Zone (EEZ) (200 n miles) is also claimed but limits have not been fully defined by boundary agreements. Patrol boats are operated by the National Surveillance and Reconnaissance Force (NSRF).

Headquarters Appointments

Director of Maritime forces: Inspector Charles Fox Sau

Prefix to Ships’ Names

RSIPV

POLICE

2 PACIFIC CLASS (LARGE PATROL CRAFT) (PB)

Name No Builders Commissioned

LATA 03 Australian Shipbuilding Industries 3 Sep 1988

AUKI 04 Australian Shipbuilding Industries 2 Nov 1991

Displacement, tonnes: 165 full load
Dimensions, metres (feet): 31.5 × 8.1 × 2.3 (103.3 × 26.6 × 7.5)
Speed, knots: 20. Range, n miles: 2,230 at 12 kt
Complement: 14 (1 officer)
Machinery: 2 Caterpillar 3516TA diesels; 4,400 hp (3.28 MW) sustained; 2 shafts
Guns: 3—12.7 mm MGs.

Comment: Built under the Australian Defence Co-operation Programme. Training, operational and technical assistance provided by the Royal Australian Navy. Aluminium construction. Nominal endurance of 10 days. The Australian government has extended the Pacific Patrol Boat programme but, following suspension of most of support of the Solomon Islands’ craft in 2001, an overdue half-life refit was not completed for Auki until 2002. Life-extension refit for Lata completed at Townsville in 2005. Auki completed a similar refit in 2010.

3 INSHORE PATROL CRAFT (PBR)

JACKPOT +2

Comment: Details are not known.

JACKPOT

4/2011, Chris Sattler / 1454717

South Africa

Country Overview

The Republic of South Africa is bordered to the north by Namibia, Botswana, Zimbabwe, Mozambique and Swaziland. With an area of 472,731 square miles, it has a 1,512 n mile coastline with the south Atlantic and Indian Oceans. South Africa also has sovereignty over the Prince Edward Islands which lie some 950 n miles south-east of Port Elizabeth. The independent country of Lesotho forms an enclave in the eastern part of the country. The administrative capital of South Africa is Pretoria and the judicial capital is Bloemfontein. Cape Town is the legislative capital and a prominent port. There are further ports at Mossel Bay, Port Elizabeth, East London, Durban, Saldanha, and Richards Bay. Territorial seas (12 n miles) are claimed. It also claims a 200 n mile EEZ but its limits have not been fully defined.

Headquarters Appointments

Chief of the Navy: Vice Admiral J Mudimu
Flag Officer Fleet: Rear Admiral Philipp Schultz

Prefix to Ships’ Names

SAS (South African Ship)

Personnel

(a) 2013: 7,508 naval
(b) 2,266 (Public Service Act Personnel)

Bases

Simon’s Town (naval); Durban (naval station); Port Elizabeth (naval station); Saldanha Bay (ratings’ training), Gordon’s Bay (officer training).

IHS Jane’s Fighting Ships 2013-2014 © 2013 IHS
A total of 73 in-service craft are receiving Modernisation:

**Programmes:**

Military lift:

- 5 complement:
  - Machinery:

  **Name** | **No** | **Builders** | **Launched** | **Commissioned**
  --- | --- | --- | --- | ---
  aMerica | LHA 6 | Huntington Ingalls Industries, Mississippi | 17 Jul 2009 | 2015
  TARPOLI | LHA 7 | Huntington Ingalls Industries, Mississippi | 4 Jun 2012 | 2017

Dimensions:

- Height: 87.9 m (289 ft)
- Length: 261.3 m (856 ft)
- Width: 34.5 m (113 ft)

Machinery:

- Two 89 standard; 185 full load (87.9; 81.8)
- 31 May 2012. A class of five is planned.
- The ship is to be fitted with a 26 bed capacity hospital and two operating rooms. The bridge is two decks lower than that of an LHA 1; the command, control and communications spaces having been moved inside the hull. The ship has gas turbine propulsion and all electric auxiliaries. The design is to be modified to include a stern dock, or well deck in LHA 8 and subsequent vessels. LHA 8 and subsequent ships will have smaller hangars to accommodate the well-deck but modified island superstructure to increase deck area.
- Operational: Homeport is yet to be announced.

79 LANDING CRAFT AIR CUSHION (LCAC)

**Programmes:**

- LCAC 46: Incorporates the best attributes of the JEFF(A) and JEFF(B) learned from over five years of testing the two prototypes. Bow ramp 28.8 ft, stern ramp 15 ft. Cargo space capacity is 1,809 ft³. Noise and dust levels are high and if disabled the craft is not easy to tow. 12.7 m, 7.62 m machine guns or 44 mm grenade launchers can be fitted.

Operational:

- LCAC 46: Structures: Includes a transport module can be carried on the cargo deck to transport up to 180 troops. Some limitations in very rough seas. Shore bases on each coast at Little Creek, VA and Camp Pendleton, CA. Of 79 craft, 71 were operational and 8 undergoing SLEP as of October 2012.
- Sales: Six to Japan. One of a similar type built by South Korea.

**Displacement, tonnes:** 44,971 full load
**Dimensions, metres (feet):** 257.3 x 94.2; 775.9 x 317.0; 130.6 x 26.7
**Speed, knots:** 22, Range, n miles: 9,500 at 20 kt
**Complement:** 1,059 (65 officers)

Military lift:

- 1,687 troops (plus 184 surge)

Operational:

- LCAC 29: Structures: Includes the best attributes of the JEFF(A) and JEFF(B) learned from over five years of testing the two prototypes. Bow ramp 28.8 ft, stern ramp 15 ft. Cargo space capacity is 1,809 ft³. Noise and dust levels are high and if disabled the craft is not easy to tow. 12.7 m, 7.62 m machine guns or 44 mm grenade launchers can be fitted.

Operational:

- LCAC 46: Structures: Includes a transport module can be carried on the cargo deck to transport up to 180 troops. Some limitations in very rough seas. Shore bases on each coast at Little Creek, VA and Camp Pendleton, CA. Of 79 craft, 71 were operational and 8 undergoing SLEP as of October 2012.