

View
Excel
Chart

5.11 Auxiliaries

5.11.1 Summary

The used international market for large auxiliary vessels should be lucrative for prospective recipient navies that are in the market from 2004 through 2013 as the number of used vessels entering the market will be much higher than the demand for such vessels during the same timeframe. Currently, over 50 navies in the world operate some type of sea-based support structure, although only fifteen operate a myriad of specialized support vessels.

Of the fifteen navies that operate specialized support vessels, only nine will be offering vessels for resale from 2004 through 2013. These navies include Canada, China, France, India, Italy, Netherlands, Saudi Arabia, the United Kingdom and the United States with a total of 33 hulls of varying types that could satisfy the requirements of recipient navies.

During the same timeframe, only nine navies will probably meet their auxiliary requirements through this type of market procuring around 18-20 units of the available vessels.

The following table depicts those nations that must be considered prospective suppliers and prospective recipients for used vessels from 2004 through 2013:

Prospective Suppliers of Used Large Auxiliary Vessels (2004-2013)	Prospective Recipients of Used Large Auxiliary Vessels (2004-2013)
Canada	Australia
China	Brazil
France	Bulgaria
India	Chile
Italy	Indonesia
Netherlands	Peru
Saudi Arabia	Poland
United Kingdom	Romania
United States	Thailand

5.11.2 Navies With Auxiliary Requirements

Most naval powers in the world operate auxiliary vessels in some capacity. Depending on the size and mission of the navy, different auxiliaries are used to provide support to the fleet whether it be refueling, delivery of stores and ammunition, a ship/submarine repair capability, or even hydrographic or survey services, ship-based support is essential if a fleet is expected to operate.

In regards to the construction of auxiliaries, the major global and regional sea powers of the world have the capacity to build and support auxiliaries of all types with several new entrants over the past several years embarking on indigenous programs as well.



AMI INTERNATIONAL

NAVAL SHIP TRANSFER ASSESSMENT

AMI International, Inc. - PO Box 30 - Bremerton, WA 98337 - +1 360-373-2686 - AMIinter.com

The newer auxiliary builders, like the historical builders, have taken the next step and made the geo-political decision to acquire and support a navy as well as moving forward with indigenous building programs for their own requirements and/or for export.

Smaller navies that support operations within their respective Exclusive Economic Zones (EEZ) and coastal waters, do realize the importance of a support force, but have no requirement for oilers and cargo vessels required to support distant operations.

The global, blue-water and regional navies are typically larger and operate long distances from coastal waters requiring much more support, while the EEZ and coastal navies require far less support. The global and regional navies of the world that typically utilize the largest number of support vessels include:

GLOBAL Forward Presence	BLUE WATER
France	Australia
United Kingdom	China
United States	Canada
	Germany
	India
	Italy
	Japan
	Korea, South
	Netherlands
	Russia
	Spain
	Turkey

REGIONAL – Alliance Participation			
Argentina	Indonesia	Pakistan	South Africa
Brazil	Iran	Poland	Sweden
Chile	Israel	Portugal	Taiwan
Denmark	Malaysia	Saudi Arabia	Thailand
Egypt	Norway	Singapore	United Arab Emirates
Greece			

Smaller EEZ navies that require very little sea-based support capability include:

EEZ FOCUS			
Algeria	Ecuador	New Zealand	Tunisia
Bahrain	Finland	Nigeria	Ukraine
Bangladesh	Ireland	Oman	Uruguay
Belgium	Korea, North	Peru	Venezuela
Brunei	Kuwait	Philippines	Vietnam
Bulgaria	Libya	Qatar	
Columbia	Mexico	Romania	
Croatia	Morocco	Sri Lanka	

There are also several coastal navies that currently rely on shore-based support. However, these navies may at some point decide to acquire used auxiliary vessels as an entrance into the sea-based support arena or simply to utilize the vessel to fulfill other mission requirements. It is quite common that small coastal navies will acquire used vessels to satisfy mission requirements other than what the vessel was originally intended. As an example, Nigeria has recently procured two buoy tenders from the US that are currently being utilized as patrol vessels. This practice will probably continue as long as coastal navies are having difficulties in acquiring vessels from any source, whether indigenous or foreign. Some nations that may be found in this category (this list is not all inclusive as there are simply too many navies to mention) include:

- Croatia
- Estonia
- Georgia
- Kenya
- Latvia
- Lithuania
- Nigeria
- Yemen

5.11.3 Prospective Suppliers

Taking into consideration the nations that currently possess auxiliaries, only a handful currently have the shipbuilding capacity to produce vessels of this size or in some cases complexity. Generally, the nations that produce auxiliaries for indigenous use typically operate these vessels for a 30 to 40-year life cycle, then replace the capability with a new construction vessel, freeing up the decommissioning auxiliaries for resale.



AMI INTERNATIONAL

NAVAL SHIP TRANSFER ASSESSMENT

AMI International, Inc. - PO Box 30 - Bremerton, WA 98337 - +1 360-373-2686 - AMIinter.com

The majority of nations that will be mentioned in this report as prospective suppliers are those navies that will be decommissioning auxiliaries from 2004 through 2013 that are around 30 years of age although a few over 30 years will be mentioned.

Prospective suppliers that will probably have available auxiliaries from 2004 through 2013 include:

- Belgium
- Canada
- China
- Finland
- France
- Germany
- Greece
- India
- Italy
- Netherlands
- New Zealand
- Norway
- Poland
- Russia
- Saudi Arabia
- South Africa
- Spain
- Sweden
- Turkey
- United Kingdom
- United States

Of all the possible suppliers listed above, the prospective platforms will be subdivided into two distinct categories. The first category will be for the large auxiliaries that could be resold to blue-water, regional and some EEZ navies. These vessels will primarily be the larger replenishment vessels that will be utilized for sustained operations at sea as well as some oceanographic vessels and other support ships such as dry cargo and repair vessels.

The second category will be for smaller auxiliaries that could be utilized by coastal navies. These vessels will primarily be used to support local operations including small replenishment ships and dry cargo ships. It is also possible that other auxiliaries such as hydrographic ships, oceanographic ships and other support ships could be procured by coastal navies and be utilized for other missions such as coastal patrol much like in Nigeria.

As mentioned earlier, the Nigerian Navy procured two US buoy tenders that are now in use as patrol vessels. The procurement took place to fill a patrol requirement for Nigeria and no other options were as cost effective. Many of the coastal navies are in the same situation as the Nigerian Navy, meager funding with few choices.

5.11.3.1 Large Auxiliaries

Of the candidates listed as prospective suppliers for resale of large auxiliaries to global, blue-water, regional, and EEZ navies, the United States and the United Kingdom will have the most to offer over the next decade. The United Kingdom will probably be decommissioning up to nine AORs (Fort Grange, Appleleaf, and Rover classes) from 2004 through around 2012. The United States will begin decommissioning three classes of large support ships beginning in 2006 including Kilauea class AEs, Mars class AFSs and Sacramento class AOE's.

Canada, China, France, India, Italy, Netherlands, and Saudi Arabia will also have a handful of AORs to offer from 2004 through 2015.

Nations that currently operate large auxiliaries that may be candidates for transfer to a global, blue-water, regional or EEZ navy over the next decade (2004-2014) are listed as follows with the prospective decommissioning date, vessel class, number available and country:



AMI INTERNATIONAL

NAVAL SHIP TRANSFER ASSESSMENT

AMI International, Inc. - PO Box 30 - Bremerton, WA 98337 - +1 360-373-2686 - AMIinter.com

Projected Years of Decommissioning	Class	Number Available	Country
2010-2011	Protecteur AOR	2	Canada
Anytime	Fuqing AOR	2	China
2012-2015	Durance	3	France
Anytime	Deepak AOR	1	India
2005-2008	Stromboli AOR	2	Italy
Already Decommissioned	Poolster AOR	1	Netherlands
2014-2015	Mod Durance AOR	2	Saudi Arabia
2009-2010	Fort Grange AOR	2	United Kingdom
2010-2012	Rover AOR	3	United Kingdom
Anytime	Appleleaf AOR	3	United Kingdom
2006-2011	Kilauea AE	6	United States
2006-2011	Mars AFS	3	United States
2004-2006	Sacramento AOE	3	United States

Projected Years of Decommissioning	Class	Number Available	Country
Anytime	Warrigal WFL/AOTL	4	Australia
Anytime	Beliga AGOR	1	Belgium
Anytime	Martha Block AGB/ABU	1	Canada
Anytime	R Class AGB/ABU	3	Canada
2008-2011	Mod R AGB/ABU	1	Canada
Anytime	Griffon AGB/ABU	1	Canada
2011-2014	Dajiang ASR	3	China
Anytime	Yanqian AGOR	2	China
Anytime	Yannan AGS	4	China
Anytime	Yenlai AGS	5	China
Anytime	Dandao AK	3	China
Anytime	Shengli AOT	2	China
Anytime	Dana AGE	1	China
2012-2015	Hylje AOS	2	Finland
Anytime	Prisma AGS	2	Finland
Anytime	La Perouse AGS	3	France
Anytime	Spessart AOL	2	Germany
Anytime	Pytheas AGOR	1	Greece
Anytime	Naftilos AGS	1	Greece
Anytime	Ouranos AOTL	2	Greece
2010-2015	Sandhayak AGS	3	India
2005	Ammiralglio Magnaghi AGS	1	Italy
2010	Anteo ARS	1	Italy
Already Decommissioned	Tydemans AGOR	1	Netherlands
Anytime	Horten ASL	1	Norway
Anytime	Lance AGS	1	Norway
Anytime	Finik II AGS	2	Poland
Anytime	Kashtan ABU	4	Russia
Anytime	Hecla AGS	1	South Africa

5.11.3.2 Smaller Auxiliaries

In addition to the larger auxiliaries as listed above, the suppliers also have a potential for up to 65 additional vessels that could be available for resale. These vessels range from small replenishment oilers (AOTLs), supply ships (AK), hydrographic survey ships (AGS), oceanographic research ships (AGORs), repair ships (AR) and buoy tenders (ABU) that could be utilized by coastal navies.

As mentioned earlier, coastal navies may procure these types of vessels as a means to satisfy numbers requirements rather specific mission requirements. The majority of these vessels are advanced in age and could become available for transfer at anytime. These vessels, with little or no repair, could be offered and sold with little or no warning.

Nations that currently operate smaller auxiliaries that may be candidates for transfer to a coastal navy over the next decade (2004-2013) are listed as follows with the prospective decommissioning date, vessel class, number available and country:

5.11.4 Prospective Recipients

Prospective recipients for auxiliaries from the used international market will fall into two separate categories. The first category will include blue-water, regional and EEZ navies that will require large support vessels. These navies will have some level of funding for the required transfer of the vessels as well as additional funding to support some type of modernization package and for general upkeep once in inventory.

The second category will again involve some regional and EEZ navies but also coastal navies that will wish to procure smaller auxiliaries in support various mission areas, but not necessarily using the ship for its original mission.

5.11.5 Situational Assessment of Potential Recipient

Navies

The Assessment section of this report will also fall into two distinct categories. The first will be a detailed assessment of blue-water, regional and EEZ navies requiring large auxiliaries and some of the prospective candidates that may fulfill those requirements. The second category will be a general listing of the coastal navies that may seek the smaller auxiliaries that may become available for resale. No detailed assessment will be made in this category as the options for matching prospective suppliers and recipients are too numerous to mention and is only meant as a general tool showing what is available and some of the potential recipients

5.11.5.1 Large Auxiliaries

Australia

The Royal Australian Navy (RAN) currently operates two large AORs including one Leaf class commissioned in 1979 and one Durance class in 1986. Currently planning by the RAN calls for the replacement of both AORs by 2015, with the Leaf class by 2007 and the Durance by 2015.

Initially, the RAN had planned to procure two new AORs under one program, however, have recently decided to replace the Leaf class with a used vessel from the international market, and replace the Durance in 2015 with a new construction AOR.

The RAN is currently considering its options for a used AOR that will probably enter service by 2007. However, most AORs that will be available around 2007 are around

the same age or older than the Leaf class but may be in better condition or offer more capability. Candidates could include the Italian Stromboli class in 2005 or the US Sacramento class that will decommission from 2004 through 2006. Additionally, it is possible that the US would decommission an AOR earlier than scheduled for transfer to the RAN or the RAN could look into acquiring a commercial ship and modifying it for naval service.

Brazil

The Brazilian Navy currently operates two large AORs including one Marajo class AOR commissioned in 1969 and one Almirante Gastao Motta class AOR commissioned in 1991. In order to keep its auxiliary fleet current, the Brazilian Navy could at any time procure a used AOR in order to replace the Marajo class.

Brazil would prefer to construct a new AOR indigenously, however, funding and construction times have been extremely slow with local programs. Although the sea service will likely not have funding for a new AOR until around 2006, it may procure a used AOR from the international market in the event that one becomes available and the terms and conditions of the transaction are favorable to the Brazilian Navy.

Some of the candidates could include the Italian Stromboli class that may be available in 2005, the United Kingdom Appleleaf class AOR that could be available at anytime, the US Sacramento class AOE when available, and the French Durance class around 2012.

Bulgaria

Bulgaria is currently in the midst of transitioning from a former Warsaw Pact country to a North Atlantic Treaty Organization (NATO) member. As part of the transition, Bulgaria is also expected to transition its navy from former Soviet built naval vessels to those that are more interoperable with the new Western alliance. Although Bulgaria has plans for new corvettes, FAC, mine warfare and auxiliary vessels; an extremely small procurement budget for the rest of the decade suggest that the Bulgarian Navy may have to take interim steps to integrate with NATO.

One of those interim steps could be to procure a used AOR since the Bulgarian Navy will be procuring Western designed vessels in the future. Currently, the Bulgarian navy operates several small classes of smaller Russian-built AORs that will not be able to support the Navy's new Western designed fleet.

AMI INTERNATIONAL

NAVAL SHIP TRANSFER ASSESSMENT

AMI International, Inc. - PO Box 30 - Bremerton, WA 98337 - +1 360-373-2686 - AMIinter.com

Candidates to supply a larger AOR to Bulgarian Navy probably include the already decommissioned Netherlands Poolster class AOR, the Italian Stromboli class that may be available in 2005, the United Kingdom Appleleaf class AOR that could be available at anytime, the United Kingdom Fort Grange class around 2009-2010, the Canadian Protector class AOR in 2010, and the French Durance class around 2012.

Chile

The Chilean Navy currently operates one Araucano class AOR that was commissioned in 1967. The AOR, well past its useful service life, will need to be replaced as soon as possible. The Chilean Navy is in the process of rejuvenating its major surface combatant fleet by the acquisition of at least five and possibly eight used frigates and will clearly need a new AOR to support its surface fleet. It is very likely to utilize the used international market for this procurement. Candidates probably include the Italian Stromboli class that may be available in 2005, the United Kingdom Appleleaf class AOR that could be available at anytime, and the US Sacramento class AOE when available after 2006.

Indonesia

The Indonesian Navy currently operates a myriad of support ships ranging from a large Rover class AOR to several classes of smaller AOTLs commissioned in the 1960s.

Current planning by the Indonesian Navy includes considerable increases in vessels of all types including submarines, corvettes, as well as amphibious and mine countermeasure vessels (MCMVs). These additional vessels will probably require additional large AORs for support. However, funding is very limited with most funding tied up in the acquisition of four new corvettes from the Netherlands, and the two planned submarines from South Korea. These two programs alone will utilize the majority of the sea services budget for the next five years, negating any plans for a new AOR.

Due to the need for increased numbers of hulls as envisioned by the Indonesian Navy, the sea service will probably enter the used international market for a large AOR. Candidates will probably include the already decommissioned Netherlands Poolster class AOR, the Italian Stromboli class that may be available in 2005, the United Kingdom Appleleaf class, Chinese Fuqing class, and Indian Deepak class AORs that could be available at anytime, the United Kingdom Fort Grange class AOR around 2009-2010, the Canadian Protecteur class AOR in 2010, and the French Durance class around 2012.

The Indonesian Navy may also attempt to procure some of the various smaller auxiliaries that are listed in the coastal navy section of this report. The sea service has a myriad of other requirements including hydrographic survey, oceanographic research, and repair missions that could be fulfilled by the smaller auxiliaries available for resale.



Peru

The Peruvian Navy is currently operating one Telara class AOT that was commissioned in 1978. In order to replace the Telara class, the Peruvian Navy will probably begin looking for a more versatile AOR by around 2010 with an expected commissioning in 2013.

However, the Peruvian Navy will probably not have the funding for a new AOR and will consider utilizing the used international market to meet its requirements. Candidates will probably include the Italian Stromboli class that may be available in 2005, the United Kingdom Appleleaf class AOR that could be available at anytime, the United Kingdom Fort Grange class around 2009-2010, the Canadian Protecteur class AOR in 2010, and the French Durance class around 2012.

Poland

Poland currently operates one Baltyk class light replenishment vessel that was commissioned in 1991 and designed for coastal operations with smaller vessels of the Soviet-era Polish Navy. With Poland's integration into the North Atlantic Treaty Organization (NATO) and plans for larger numbers of blue-water vessels, the Navy will require a larger AOR to support its new fleet as well as NATO vessels in the Baltic Region.

Current planning calls for a new AOR with funding beginning in 2010 followed by commissioning by around 2013. However, the Polish Navy is in a severe procurement funding crunch as it has just procured four Ex-Norwegian Kobben class submarines in 2003 and is currently involved in a new corvette procurement, which has stalled due to a lack of funding.

With funding shortfalls that could last up to a decade, the Polish Navy may decide to utilize the used international market to meet its AOR requirements. The used market could provide an interim solution with the

already decommissioned Netherlands Poolster class AOR, the Italian Stromboli class that may be available in 2005, the United Kingdom Appleleaf class AOR that could be available at anytime, the US Sacramento class AOE when available after 2006, the United Kingdom Fort Grange class around 2009-2010, the Canadian Protecteur class AOR in 2010, and the French Durance class around 2012.

Romania

Romania is currently in the midst of procuring two Broadsword (Type 22 Batch 2) class frigates from the United Kingdom under a Romania/United Kingdom government-to-government agreement. Romania is taking delivery of used naval vessels from Western Europe in an attempt to update its naval forces along western lines since the nation was invited to join the North Atlantic Treaty Organization in 2002.

Romania is currently planning for a new construction AOR to begin in 2009 with delivery scheduled by around 2012. However, with new procurement funding at a premium, the sea service may begin to investigate the used international market for a more versatile AOR to replace the two Croiter class AEs that were commissioned in 1980 and 1982. The Croiter class does not have the refueling capabilities that will be required of the Romanian Navy in the NATO alliance.

Candidates may include the already decommissioned Netherlands Poolster class AOR, the Italian Stromboli class that may be available in 2005, the United Kingdom Appleleaf class AOR that could be available at anytime, the United Kingdom Fort Grange class around 2009-2010, and the French Durance class around 2012.

If the Romanian Navy wishes to maintain an AE force as well, it could also attempt to procure a US Kilauea class AE when available beginning in 2006.



Thailand

The Royal Thai Navy (RTN) is currently operating one Similan (Chinese Hudong) class AOR commissioned in 1996. However, the RTN has a requirement for a second unit and if funding is available by around 2012, the sea service will more than likely procure a new second unit of the class.

However, in the event that the RTN cannot fund a new second unit, it could enter the used international market as a way to procure another AOR. In the past two decades, the RTN has typically procured only new construction vessels but recent procurements of new offshore patrol vessels (OPVs) and plans for additional combatants may force the sea service to consider the acquisition of a used AOR.

In the event that the RTN procures a used vessel, candidates will probably include the Italian Stromboli class that may be available in 2005, and the United Kingdom Appleleaf class AOR that could be available at anytime.

5.11.5.2 Coastal Navies That May Procure Smaller Auxiliaries

The following nations that may procure some of the smaller auxiliaries include:

- Albania
- Croatia
- Estonia
- Georgia
- Kenya
- Latvia
- Lithuania
- Nigeria
- Yemen

No individual country assessments are provided, as the available ships and timing of a transfer are too uncertain for AMI to even put forward an estimate.

Photos Courtesy Of:

Page 99:	Rick Dorn Personal Collection
Page 100:	United States DoD
Page 101:	United Kingdom MOD
Page 104:	Rick Dorn Personal Collection
Page 105:	Rick Dorn Personal Collection
Page 106:	United States DoD

