

5.3 Frigates



5.3.1 Summary

The used international market for frigates will become more competitive over the next decade as the total number of used frigates available declines throughout the decade while the number of prospective recipients with frigate requirements will remain about the same. This disparity of supply and demand will make it more difficult in regards to prospective recipients attempting to procure used frigates from the international market. Currently, 41 navies operate surface combatants of this size with virtually no new entrants envisioned in the near term.

The majority of frigates have been built by a handful of nations including Australia, Canada, China, France, Germany, Japan, India, Italy, Netherlands, Norway, Russia, South Korea, Spain, Taiwan, the United Kingdom and the United States. However, only a few nations will be responsible for the export of the majority of used frigates during the study period, 2004 through 2013. Prospective suppliers include Australia, Germany, India, Italy, Netherlands, South Korea, the United Kingdom and the United States for a total of around seventy-one available hulls.

Potential recipient navies could include up to twenty sea services that will be looking for replacement vessels through 2013. As mentioned in the Cruiser-Destroyer report, larger vessels such as destroyers may meet some of these requirements since the frigate market will be limited by a short supply of available vessels in a market with higher demand.

The following table depicts those nations that must be considered prospective suppliers and prospective recipients for used vessels.

Prospective Suppliers of Used Frigates (2004-2013)	Prospective Recipients of Used Frigates (2004-2013)	
Australia	Argentina	Nigeria
Germany	Bangladesh	Pakistan
India	Belgium	Peru
Italy	Brazil	Poland
Netherlands	Bulgaria	Portugal
South Korea	Chile	Romania
United Kingdom	Ecuador	Thailand
United States	Egypt	Turkey
	Greece	United Arab Emirates
	Indonesia	Uruguay
	Mexico	

5.3.2 Navies With Frigate Requirements

As of the early 21st century, many nations of the world operate large warships that are classified as frigates. In regards to the construction of frigates, it can be said that there is a growing number of nations embarking on indigenous programs. Newer frigate builders have made the geo-political decision to acquire and support a navy as well as moving forward with indigenous building programs for its own requirements and potentially for export as well.

Some nations, although realizing the importance of a naval fleet, have not made the political decision to develop the technology or industrial capacity to indigenously produce naval vessels, or may be embarking on such programs at a very slow pace. These nations are compelled to search for a solution on the naval used ship market.



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However, due to the limited number of frigates that will be available for transfer these countries may find themselves looking at ships as large as destroyers or as small as the corvette to meet their requirement..

The navies of the world that currently operate frigates include:

- Argentina
- Australia
- Bahrain
- Bangladesh
- Belgium
- Brazil
- Canada
- Chile
- China
- Ecuador
- Egypt
- France
- Germany
- Greece
- India
- Indonesia
- Italy
- Japan
- Malaysia
- Mexico
- Netherlands
- New Zealand
- Nigeria
- Norway
- Pakistan
- Peru
- Poland
- Portugal
- Romania
- Russia
- Saudi Arabia
- South Korea
- Spain
- Taiwan
- Thailand
- Turkey
- United Arab Emirates
- Ukraine
- United Kingdom
- United States
- Uruguay

There are also several navies that have traditionally operated coastal defense forces that have recently made the decision to procure larger vessels of the frigate size. One such nation is Singapore, which began its Project Delta frigate program in 1995 and calls for the delivery of six frigates from 2007 through 2011. South Africa also began a frigate program under the auspices of the MEKO A200SA program in 1998 that calls for the delivery of four frigates by the end of 2005. Although both nations are acquiring new frigates, South Africa chose not to invest in the shipbuilding infrastructure of the country and continues to import all of its major naval hulls. Singapore, on the other hand, continues to

invest and expand its shipbuilding capabilities and will construct five of the frigates in Singapore. Both of these nations will not be mentioned any further in this report, other than that, with Singapore having a well developed shipbuilding industry, may at some point in the distant future, (outside the ten year window of this report) become a prospective supplier.

5.3.3 Prospective Suppliers

Taking into consideration the nations that currently possess frigate sized vessels, only a handful currently has the shipbuilding capacity to produce vessels of this size. The nations that produce frigates for indigenous use typically operate these vessels for a 20 to 30-year life cycle, then replace the capability with a new construction vessel, freeing up the decommissioning frigates for resale.

The majority of nations mentioned in this report as prospective suppliers are those navies that will be decommissioning frigates from 2004 through 2013 that are typically less than 30 years of age although a few over 30 years will be mentioned. As a general rule, any vessel that is over 30 years of age is decommissioned by the prospective supplier and not offered for resale on the international market due to their advanced age and out of date systems, even if the hull is still in good shape.

Prospective suppliers that may have available frigates from 2004 through 2013 include:

- Australia
- Germany
- India
- Italy
- Netherlands
- South Korea
- United Kingdom
- United States

Of the candidates listed, the United States will probably have the most to offer considering it will be decommissioning 30 Oliver Hazard Perry class frigates from 2004 through 2019. Additionally, the United States Coast Guard will be decommissioning its twelve Hamilton class high-endurance cutters beginning in 2007.



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It must be noted that the Hamilton class is past the typical 30-year life cycle for large vessels, however, the ships have been well maintained and could be attractive to several navies as offshore patrol vessels (OPV) in spite of their advanced age, particularly for navies that do not face any significant air or subsurface threat.

Australia, Germany, India, Italy, the Netherlands, South Korea and the United Kingdom will also each have a handful of frigates that will be decommissioning from 2004 through 2013. Australia is planning to decommission two of their Adelaide class frigates beginning in 2006 as part of a cost savings plan that will allow an AAW upgrade program to be initiated. The remaining four will remain in service until the RAN's planned air defense destroyer (SEA 4000) enters service commencing in 2013.

Germany may decommission three of its Bremen class (8) beginning in 2005 as part of their next cost savings program initiated in early 2004 by the Ministry of Defense. The remaining Bremen class frigates are expected to be included in a modernization program that will improve the capabilities of the Brandenburg class as well. Should the Bremen class be included in the modernization program as presently discussed the remaining five ships would likely remain in service until 2017 when its replacement program, the delayed frigate program F125, would commission its first ship.

India, currently in the midst of its Project 17 Class Frigate Program, may be in the position to begin decommissioning its Nilgiri class frigates beginning around 2006. It must be noted that the Nilgiri class, like the United States Coast Guard Hamilton class is advanced in age and may have very few takers. Further, it must be once more remarked that India has never transferred any major surface combatants to date and it would be a big political step to do so.

Italy may also decide to offer its used frigates when it begins taking delivery of its new frigates under the New Generation Frigate Program beginning around 2008. Up to ten new frigates will be delivered to the Italian Navy freeing up the Maestrale class for possible resale. All eight of the Maestrale class could be potential candidates with prospective decommissioning dates from 2008 through 2015.

The Netherlands is an immediate supplier in the used frigate market as the Royal Netherlands Navy (RN1N) continues its resizing of the fleet. A 2003 decision by the Netherlands Government to further reduce its major surface force by four additional units means that two Jacob Van Heemskerck and two Karel Doorman class frigates are available, potentially decommissioning this year and certainly not later than early 2006. Both of these classes were built in the late 1980s and early 1990s and must be considered very attractive candidates by prospective recipient navies. Indeed the four ships were so attractive that the Chilean Navy signed a contract with the Netherlands government to acquire all four in March 2004.

South Korea may be a new entrant to the market as its Ulsan class frigates will start to be replaced around 2007 by the KDX-2 and KDX-3 Destroyer Programs. Although the Ulsan class consists of nine units, only the five newest units commissioned from 1986 through 1993 will probably be offered for resale.

The United Kingdom, in addition to significant numbers of Type 42 (Manchester and Sheffield) class destroyers available for transfer from 2005 through 2012, will probably decommission two perhaps even three Duke (Type 23) class frigates in 2005 as the British Government has also made a decision to reduce its

surface combatant force from 32 to 27 units (three Sheffield class destroyers decommissioning in 2005 also).

Japan, although an operator of large numbers of frigates, by policy, does not export military equipment. Russia, also an operator of large numbers of frigates will probably not decommission or make available on the used international market any of its current or reserve fleet as severe financial restrictions will probably not allow for the decommissioning of any units for the foreseeable future. As far as a provider of naval vessels for the foreign market, Russia would preferably sell new construction vessels as a way to generate revenue and help lower the cost of its own naval programs.

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

Projected Years of Decommissioning	Class	Number Available	Country
2006-2007	Adelaide	2	Australia
2005-2007	Bremen	3	Germany
2006-2010	Nilgiri	5	India
2008-2015	Maestrале	8	Italy
2004-2006 to Chile	Jacob Van Heemskerck	2	Netherlands
2004-2006 to Chile	Karel Doorman	2	Netherlands
2007-2010	Ulsan	5	South Korea
2005	Sheffield (Type 23)	2	United Kingdom
2004-2019	Oliver Hazard Perry	30	United States
2007-2014	Hamilton (Coast Guard)	12	United States

5.3.4 Prospective Recipients

Prospective recipients for frigates from the used international market will probably procure these vessels for two reasons. The first is the recipient nation that currently operates these vessels, wishes to continue with a frigate force and does not have the ability to indigenously construct vessels of this size or complexity and rarely has sufficient funding for new construction programs.



The second is for recipient nations that have a requirement for new frigates but will procure used vessels as an interim measure until new frigates can be procured at a later date. As mentioned in the Cruiser-Destroyer Report and the Corvette Report, some recipient navies may be willing to move up in size to a destroyer or down in size to a corvette in order to fulfill its frigate requirements. Although this method can be a drawback for smaller navies owing to a mismatch in requirements and/or personnel and operations liabilities, in some instances this solution is a last resort as well as the only sensible solution.

Nations that have historically procured frigates from the used international market and will continue to do so include:

Lack Ability to Construct

- Bangladesh
- Ecuador
- Egypt
- Indonesia
- Mexico
- Peru
- United Arab Emirates
- Uruguay

Lack Sufficient Funding/Commitment

In addition to the nations listed above, there are a growing number of nations that currently have new frigates programs planned, have had indigenous program in the past, or are planning indigenous programs. However, funding issues could eventually lead to a used ship solution. Navies that have had or may need to utilize the used international market as an alternative to new construction include:

- Argentina
- Brazil
- Bulgaria
- Chile
- Greece
- Romania
- Poland
- Portugal
- Thailand
- Turkey

5.3.5 Situational Assessment of Potential Recipient Navies

Argentina

The Argentine Navy currently operates four Almirante Brown (MEKO 360) frigates that were commissioned in 1983 and 1984. Argentina will more than likely operate this class for a 30-year life cycle. Based on this calculation, the Argentine Navy will not require a new frigate until around 2013.



Due to continuing financial problems in Argentina, it is not likely that the Argentine Armed Forces will receive any significant increase in funding over the long-term, which has been reduced by 66% over the past several years. It is very probable that if the Argentine Navy replaces the Almirante Brown class, it will be with frigates from the used international market.

Some of the candidates may include the Italian Maestrale class, expected to decommission from 2008 through 2015, and the US Oliver Hazard Perry class, with 30 decommissionings scheduled from 2004 through 2019.

It must be noted that the Argentine Navy has historically received the majority of its major surface combatants from the European continent and may continue to do so.

However, unless there are further European decommissionings that are not yet projected, the Navy may well have to utilize other sources possibly including the US to help fulfill its requirements, although neither the US or Italy have historically provided major surface combatants to the Argentine Navy.

Other options for the Argentine Navy probably lie on the destroyer market. As discussed in the Cruiser-Destroyer Report, the sea service has two Hercules (Type 42) class destroyers in its inventory that will need to be replaced. It is possible the Navy could acquire additional destroyers to replace the frigates as well, although manning requirements and operational costs are significantly higher when moving up to larger vessels. This option would strictly be dependent on the cost of the vessels as well as material condition.

Some of the destroyer candidates include possibly the US Spruance class destroyer, of which many are already decommissioned.

Bangladesh

The Bangladeshi Navy currently operates a mixture of aging British and South Korean frigates. The most recent delivery to the Bangladeshi Navy includes the South Korea Modified Ulsan class frigate in 2001. Both British classes in service include the Leopard (Type 41) and Salisbury (Type 61) built in the 1950s.

Due to an extremely limited budget, the Bangladeshi Navy has had a difficult time in funding new construction vessels. However, the sea service has a requirement

for at least one new frigate and will eventually need to replace the Leopard and Salisbury classes.

Due to the myriad of suppliers for the Bangladeshi Navy in the past, the sea service will also probably consider many different options for its future fleet. Unfortunately for the Bangladeshi Navy which has always been short of funding for new vessels, it will probably be constrained to rely on the used international market to meet its future requirements.

One option may include the South Korean Ulsan class frigate, which up to five units may decommission from 2007 through 2010 as the KDX-2 and KDX-3 Destroyer Programs come to fruition. South Korea has recent ties to the Bangladeshi Navy with the deliveries of one new Modified Ulsan class frigate in 2001 and one Sea Dragon class fast attack craft (FAC) in 1998. These ties make the South Korea Ulsan class the leading candidate. A second candidate may be the Indian Nilgiri class frigate, which may decommission from 2006 through 2010 as they are replaced by the Project 17 Frigate Program.

As discussed in the Cruiser-Destroyer Report, the Bangladeshi Navy may accept a destroyer rather than a frigate to fulfill its requirements. The alternative of smaller destroyers that are in good material condition and the price is right. Those options could be the British Type 42, the Chinese Luda II and the Indian Rajput class.

Belgium

Belgium has spoken in the past of a new frigate program to replace its three Wielingen class frigates that have been in service since 1978. Identified as the Multi-Purpose Escort Vessel (MPEV) Program, at least three units were planned and expected to enter service from 2010 through 2013. However, in late 2003 an extremely attractive alternative surfaced and had to be considered by the Belgium Government. The Royal Netherlands Navy (RN1N) in late 2003 decided to down size its major surface combatant force by four units and will be decommissioning the two ships of the Jacob Van Heemskerck class and two units of the Karl Doorman class no later than 2006. The opportunity to acquire at a minimum the Karel Doorman frigates was considered by many, including the Belgian Navy, as a perfect solution, particularly as the Belgian and RN1N navies currently operate under the joint command Admiral Benelux (ABNL) and the addition of RN1N vessels into the Belgian inventory would have also resolved a number of interoperability issues between the two fleets.

As a result of the rejection of the used ships, it may well be that the Belgian Government is electing to make its contribution to NATO through mine hunting. The Belgian Navy would no longer need frigates and would limit its day-to-day activities to the EEZ and coast guard functions. The actions of the government in the remainder of 2004 will likely write the future.



Brazil

Brazil currently maintains an aging force of destroyers and frigates that were delivered from the 1970s through the 1990s.

Brazil has historically procured its large surface combatants through two channels including the use of international

market while developing its own indigenous shipbuilding capability. Through the 1970s and 1980s, the Brazilian Navy took delivery of new construction Niteroi and Inhauma class corvettes built in the United Kingdom and Brazil, while at the same time capitalizing on the used international market with the procurement of two US Garcia class frigates in the 1980s and four United Kingdom Broadsword (Type 22 Batch 2) class frigates in the 1990s.

Brazil continues the development of its indigenous shipbuilding capabilities with the Barroso class frigate (an enlarged Inhauma corvette) albeit slowly. Limited funding has basically forced the construction of the Barroso class to a very slow pace with the first unit taking 12 years from beginning of construction in 1994 to an expected commissioning in 2006. Due to the extremely slow construction time, the Brazilian Navy has begun seeking alternatives from the used international market.

In 2003, the sea service apparently approached the United States for the possible acquisition of two to four Spruance class destroyers. Although the requirement is for the replacement of Garcia class frigates, the material condition of the Spruance destroyer (built from 1975 – 1983) is considered good and on the right terms, could be introduced into the Brazilian Navy. Twenty-one Spruance have been decommissioned as of the end of 2003, with the ten remaining units scheduled for decommissioning through 2005.

If the Spruance class destroyer option does not materialize, the Brazilian Navy may also begin looking at frigate options including additional units of the Broadsword class (Batch 3) that may be



decommissioning from 2005 through 2009, the German Bremen class that are expected to decommission from 2005 through 2007, and the Italian Maestrale class which may decommission from 2008 through 2015, and the US Oliver Hazard Perry class of which several units are already available.

Bulgaria

Bulgaria currently maintains one aging Koni class corvette built in the 1970s. Since being invited to join the North Atlantic Treaty Organization (NATO) in 2002, the Bulgarian Armed Forces has been in a transition stage in order to meet its entrance date in 2004. Part of the transition was the redefinition of the nation's naval role as well as modernizing its equipment for better interoperability with its prospective NATO partners. Naval planners are currently planning for a fleet of at least two new corvettes, with expected commissioning date in 2011 and 2013, although those plans could be delayed due to funding issues.

Although Bulgaria surely has the ability to build corvette-sized (it doesn't have the intention to build frigates) vessels indigenously, the integration of complex Western arms will require assistance. Funding will be a primary issue for at least a decade as it moves forward with the transition of all the armed services. Unfortunately for the Bulgarian Navy, it is the lowest priority of all the services, and may wish to move ahead with interim measures in order to acquire a more modern frigate or corvette force that is interoperable with its NATO partners.

If the Bulgarian Navy decides to enter the international market due to a delay in its Future Corvette Program, it would acquire vessel(s) of European origin. As the



choices are very limited and the acquired ship will likely play the role of flag ship of the navy, the selection of a frigate is more likely. There are reports that the Navy is considering the Wielingen class from Belgium, the Perry class from the United States (probably too large), and likely also frigates from the UK.

Chile

Up until January 2004, the Chilean Navy had been involved in the biggest new ship acquisition in the history of the sea service. However, the program Proyecto Fragata, which was expected to deliver three new frigates to the Navy, was cancelled in late January in favor of the acquisition of four used frigates. The four used frigates will be transferred from the Netherlands and will include the two Jacob Van Heemskerck class as well as two of the Karel Doorman class, all four ships are expected to decommission from the Royal Netherlands Navy (RN1N) between 2004 and 2006.

These four frigates in conjunction with the recently transferred *Almirante Williams* (Type 22 – *Sheffield*) class frigate from the Royal Navy (RN) will replace three Pratt class destroyers and three Leander class frigates built in the 1960s and 1970s.

Since the contract has been signed there has been discussion of acquiring yet another three frigates from the RN, possibly even the 1990s built Duke class. With such an acquisition the Chilean Navy would be able to attain its goal of an eight-frigate fleet

Ecuador

The Ecuadorian Navy currently operates two Leander class frigates that were procured from the United

Kingdom. Built in the 1960s, the Ecuadorian Navy will probably begin considering the replacement of these vessels. Although the Ecuadorian Navy would like to start a new frigate program later in the decade, financial constraints will probably prevent it from happening.

Realistically, Ecuador will probably try to acquire used vessels from the international market to replace the two units of the Leander class. Options that may be considered are the German Bremen class that are expected to decommission from 2005 through 2007, the Italian Maestrale class which will decommission from 2008 through 2015, the United Kingdom Broadsword class decommissioning from around 2005 through 2009, and the South Korean Ulsan class that will begin decommissioning around 2007.

Although the Ecuadorian Navy has a requirement for a frigate, the sea service may consider a destroyer or OPV in good material condition and for the right terms. If Ecuador elects to replace the Leander class with destroyers, prime candidates may include the British Sheffield (Type 42) class, which will begin decommissioning around 2008 or the French Georges Leygues class that will also begin decommissioning around 2008.

As an alternative, the Ecuadorian Navy could elect to procure the United States Spruance class of which 21 have already been decommissioned. It must be noted that Ecuador has traditionally acquired its naval assets from European suppliers and is likely to do so in the future, although US vessels may be considered as well.

Egypt

The Egyptian Navy took possession of four Oliver Hazard Perry class frigates from 1996 through 1998 and two Knox class frigates in 1994. These six units make up the bulk of the Egyptian major surface combatant force, barring the two Chinese-built Jianghu I class corvettes. Egypt will probably continue to operate a six-vessel frigate force for the foreseeable future, and may attempt to replace the two Knox class frigates, which are more than 30 years of age and have boiler problems.

If the Egyptian Navy decides to replace the Knox class in the near term, it will more than likely procure additional Oliver Hazard Perry class frigates from the US under an Excess Defense Article (EDA) agreement.

Greece

Greece has historically procured its large surface

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combatants through two channels including the used international market while developing its own indigenous shipbuilding capability. Through the 1980s and 1990s, the Greek Navy took delivery of new construction Hydra class frigates built in Germany and Greece, while at the same time capitalized on the used international market with the procurement of ten Kortenaer class frigates from the Netherlands and two Charles F Adams class destroyers from the US.

Greece is currently planning for the acquisition of up to three new frigates under the Greek Corvette (Frigate) Program. Originally planned as a corvette, this program continues to change and the Greek Navy is now planning for a frigate-sized vessel. However, due to changes in the program, it may face significant funding shortfalls, and could be delayed. In the event the Greek Corvette Program is canceled, the Greek Navy may once again go to the used international market to meet its requirements.

It must be noted that the expansion of indigenous shipbuilding capabilities is a high priority in Greece, and industry and the Greek Navy will accept used vessels only as a last resort. Some candidates might include the German Bremen class that may come on the market in 2005, the Italian Maestrale class that will decommission from 2008 through 2015, and the United Kingdom Broadsword class decommissioning from around 2005 through 2009 and the Duke (Type 23) class of which two units will commission in 2005.

Indonesia

Indonesia possesses a fleet that is primarily made up of used vessels from the international market. Unfortunately for the Indonesian Navy, it continues to be under-funded and primarily relies on the international market to meet its naval requirements. Over the past several years, there has been talk from the Indonesian Navy concerning the expansion of the nation's shipbuilding base and the indigenous construction of submarines, corvettes, fast attack Craft (FAC) as well as amphibious and mine warfare vessels.

For Indonesia, this approach will take many years to come to fruition and will probably continue to search the used market to replace its fleet of Ahmad Yani (Van Speijk) class frigates acquired from the Netherlands in the 1960s and the Samadikun (Claud Jones) class frigates from the United States in the 1950s.

For Indonesia, the key will be condition and cost. The Indonesian Navy has been relegated to an outdated naval force incapable of protecting its own island chain and will probably be amiable to almost any deal from the used market in order to replace its aging fleet. Although the sea service does not operate any destroyer sized vessels, if the terms are right, the Indonesian Navy would probably consider the offer.

Another point that must be considered by Indonesia is the market itself, which will be restricted due to the international political climate associated with the internal political situation, East Timor, and Aceh and most recently the foreign perception that Indonesia has not been completely forthcoming in its International War on Terrorism. These events will probably continue to plague Indonesia for the foreseeable future, restricting the market in which Indonesia can do business.

Due to the special relation between the Netherlands and Indonesia the Jacob Van Heemskerck or the Karel Doorman class would have been excellent candidates, however, the prospective sale to the Chilean Navy will force them to look elsewhere. Candidates may include the Indian Nilgiri class frigate, although aging could become available and if the Indian Government makes the decision to export major surface combatants. The Nilgiri class could become available beginning in 2006 with the delivery of the first Project 17 class frigate.

South Korea could become an option when it begins to take delivery of its KDX-2 class destroyers in 2007 freeing up the Ulsan class frigates for resale if the South Korean Government elects to begin exporting large surface combatants. South Korea is reportedly already discussing the sale of used submarines to Indonesia and has recently begun construction on a new amphibious vessel for the Indonesian Navy, so this option must be considered as a strong one.

As discussed in the Cruiser-Destroyer Report, if none of the frigate options ever materialize, the Indonesian Navy could possibly look to larger vessels in the destroyer size in order to modernize its major surface combatant force. The decision to upgrade to a larger vessel would probably be strictly based on price, terms and material condition. Some of the destroyer candidates may include the French Georges Leygues





class, the United Kingdom's Sheffield class, or even the Chinese Luda II class or the Indian Rajput class. As mentioned earlier in this report, neither China nor India have ever transferred large surface combatants and this would be a key political hurdle to do so, and the French and British options would probably be viewed on a case by case basis relative to the political climate.

Mexico

Mexico is currently involved in new procurement programs involving Offshore Patrol Vessels (OPVs) and patrol boats. All of its needs for large surface combatants have traditionally been from the used international market, primarily from the United States. Mexico does not have the ability to indigenously construct large naval vessels or integrate the appropriate combat systems and will continue to rely on used vessels of the frigate size and larger.

Most recently, Mexico acquired the Knox class frigate (Whipple) from the United States in August of 2002. Additionally, the Mexican Navy has been offered Spruance class destroyers from the United States as replacements for the aging Quetzalcoatl (Gearing FRAM I) class built in the 1940s. Mexico turned down the offer for the Spruance class in 2003 owing to their size and manpower requirements. The Mexican Navy will probably attempt to replace their current frigate force with vessels of the frigate size.

Options will probably include the US Oliver Hazard Perry class. An additional option would be the US Hamilton Coast Guard cutters (OPVs) when they start decommissioning around 2007 with delivery of the first National Security Cutter. The US vessels will probably be offered as a grant (free of charge).

Nigeria

The Nigerian Navy currently operates one MEKO (Type 360) class frigate that it acquired from Germany in 1982. Funding to the sea service has been extremely poor for the past two decades relegating the Navy to the used international market. The majority of vessels received in the past several years have been aging smaller auxiliary vessels and are being utilized for patrol missions.

If the Nigerian Navy decides to replace its lone MEKO class frigate, and this is a very questionable acquisition, it will be very restricted in its options. It can be said that without a doubt that it would have to procure a used vessel, and that vessel would more than likely have to be a grant (free of charge). The most logical option would be the US Hamilton class Coast Guard cutter of which the first one will probably become available around 2007, when the US Coast Guard takes delivery of the first National Security Cutter (NSC). This vessel would be operated as an OPV rather than as a frigate. The United States Government has maintained close ties to the Nigerian Government in recent years and has been providing military assistance to the country, including several Coast Guard Balsam class buoy tenders that are now being used as patrol vessels.

Pakistan

Pakistan is currently involved in the procurement of up to eight new frigates (Chinese F22P design) with seven units being built indigenously at the Karachi Naval Shipyard. Pakistan has a high priority in developing its indigenous naval shipbuilding industry due to its history as an object of embargoes from most major suppliers.

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Pakistan with its extremely limited naval budget, decided in the late 1990s that indigenous construction would be more beneficial. It started an indigenous submarine program with French assistance for three units of the Agosta 90B (second and third units partially or wholly built in Pakistan) class, with two units delivering in 2003 and 2006. By 2000, the Pakistani Navy decided to move forward with an indigenous frigate program with Chinese assistance.

As a result of Pakistan's indigenous frigate program, the sea service may be able to break away from the used international market. However, if the program fails or faces any significant delays, then and only then would the Pakistani Navy attempt to acquire used vessels from international sources. The least expensive prospect would probably be the US Oliver Hazard Perry class. Political ties between the Pakistani and US Governments have improved significantly as allies in the War on Terrorism and could be a factor in any negotiation.

Pakistan would also look at the United Kingdom Broadsword (Type 22 Batch 3) class as a possible option as four units of the class may be decommissioned from 2005 through 2009.

Peru

Peru has recently signed a contract for four used Lupo class frigates from Italy. The four units will replace the single aging Daring class destroyer commissioned in the 1950s and at least two of the oldest Lupo (Carvajal) class frigates currently in service. The Italian Lupos have more firepower and have been better maintained than the original four units of the Peruvian Navy (two built in Italy, two in Peru).

The Peruvian Navy has a requirement for only five active major combatants (not counting the De Ruyter class cruiser – flagship), and the additional Lupo frigates from Italy will satisfy this requirement until after 2014. By 2014, the Peruvian Navy will have to begin planning for the replacement of the Lupo class, either a new construction program or to reenter the international market for newer used vessels, which is more likely.

Prior to the newest frigate program, the Navy was very dependent on outside sources for its major surface combatant forces. In the 1980s, the Pakistani Navy procured used Leander class frigates from the United Kingdom and leased four Garcia and four Brooke class frigates from the United States. In 1993, the United States reclaimed its eight frigates as a result of Pakistan's nuclear weapons program. As a replacement, the Pakistani Navy acquired six Amazon class frigates from the United Kingdom in 1993 and 1994.

Poland

Poland received two Oliver Hazard Perry class frigates, the first in 1999 and the second in 2002. Both units were delivered to Poland as an interim measure until it could replace its Soviet era fleet with a modern Western-built fleet as part of its decision to enter the North Atlantic Treaty Organization (NATO).

The Polish Navy began its first western naval procurement program with the order of two MEKO class frigates (Gawron II class) from the Gdynia Shipyard in Poland (with German assistance) in 2000. The total program contains an option for five additional units for a class of seven. A funding shortfall has delayed this program and may well reduce the total number of units of the class. If the Navy can't afford the original seven hulls it may decide to reenter the used international market to fulfill its requirements.

Candidates include additional units of the Oliver Hazard Perry, in which the Polish Navy already has two operational units, and the first units of the German Bremen class which will likely decommission starting in 2005. The Polish Navy already has close ties to Germany through the MEKO Program making it a strong option.

Portugal

The Portuguese Navy's frigate force currently consists of three Vasco Da Gama class commissioned in 1991 and three Comandante Joao Belo class commissioned in the 1960s. Priority programs such as a new submarine (questionable) and the NPO 2000 Offshore Patrol Vessel (OPV) Program continue to hamper any efforts to replace the Comandante Joao Belo class frigates with new construction.

The Portuguese Navy is already seeking to replace the Comandante Joao Belo class. The Portuguese Navy has been offered at least one unit of the Oliver Hazard Perry class from the United States although a final decision has yet to be made but the Navy needs three ships. If three Oliver Hazard Perry class can not be offered, then the Portuguese may need to consider the three German Bremen class ships that are expected to become available commencing in 2005, or the United Kingdom Broadsword class.

Romania

Romania is currently in the midst of procuring two Broadsword (Type 22 Batch 2) class frigates from the United Kingdom. A Romania/United Kingdom

government-to-government agreement stipulated the delivery of two frigates to the Romanian Navy by 2005. Both units are currently undergoing modernization in the United Kingdom.

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 will probably operate both of these vessels as an interim measure until it can begin its own indigenous frigate program beginning around 2016.

Thailand

Thailand is currently involved in several procurement programs including a new frigate program and a new Offshore Patrol Vessel Program (OPV). Although the Royal Thai Navy (RTN) prefers the acquisition of new naval vessels, budget constraints suggest that some requirements must be met by the used vessel market.



A Memorandum of Understanding (MoU) was signed between the Thai and United Kingdom Governments in 2001 concerning the procurement of new and vessels for the RTN from the United Kingdom. Part of the stipulation was for the acquisition of two used frigates from the United Kingdom as well as used vessels. If the RTN elects to procure used vessels from the United Kingdom, they could either be the Broadsword (Type 22 Batch 3) class frigates or the Type 42 Destroyers of the Sheffield or Manchester classes. The Broadsword class may be decommissioned early (2005-2009) as the British Government made a decision in late 2003 to reduce the major surface combatant force from 32 to 27 units and could be made available. The Sheffield class expected to decommission three units in 2005 and the remainder from 2008 through 2011 and the Manchester class from 2012 through 2015. Additionally, two Duke (Type 23) class frigates will decommission in 2005 and may be candidates for transfer to the RTN.

Turkey

Turkey has historically procured its large surface combatants through two channels including the used international market while developing its own indigenous shipbuilding capability. Through the 1980s and 1990s, the Turkish Navy took delivery of new construction Barbaros and Yavuz class frigates built in Germany and Turkey, while at the same time it capitalized on the used international market with the procurement of seven Oliver Hazard Perry class and five Knox class frigates from the US.

Turkey is currently planning for the acquisition of up to 8 MILGEM class corvettes. However, the program continues to face delays due to funding shortfalls and changes in the political climate in government and the Ministry of Defense. If the entire 8-unit class of corvettes is not realized, the Turkish Navy could again be forced to the used international market to meet its requirements to replace the later units of the projected class (after 2012).

It must be noted that the expansion of indigenous shipbuilding capabilities is a high priority in Turkey, and industry and the Turkish Navy will accept used vessels only as a last resort. If the last resort occurs, the Turkish Navy would probably acquire additional units of the US Perry class to offset a scaled down MILGEM Program, although the majority of the remaining Perry class will not be available until 2012.

United Arab Emirates

The United Arab Emirates currently operates two used Kortenaer class frigates that were procured from the Netherlands in 1997 and 1998. Although the UAE Navy planned for a new frigate and a new corvette in the late 1990s, reality dictates that the Navy may get up to six corvettes under the Al Baynunah Program and no new frigates. The Al Baynunah class was to have begun in 2002 but did not receive its final signature until December 28, 2003.

The UAE Navy is now considering modernizing its two frigates and therefore postponing a decision to procure new frigates for a number of years. Sometime in the next decade the UAE, based on its experience in the Al Baynunah project, will face the decision whether to build new frigates or enter the used frigate market. Both frigates in service were commissioned in the early 1980s and will probably stay in commission until around 2015.

Uruguay

Uruguay is currently operating three Commandant Riviere class frigates that were commissioned in the late 1950s and the early 1960s. Without any indigenous shipbuilding capabilities or adequate funding for a new frigate program, the Uruguayan Navy will continue to depend on the used international market. The Commandant Riviere class currently in service was procured from France as second hand units in the late 1980s.

Sometime in the near future the Uruguayan Navy will probably attempt to procure more used frigates from



the international market to replace the Commandant Riviere class. Options that may be considered are the German Bremen class that are expected to decommission around 2005, the Italian Maestrale class which will decommission from 2008 through 2015, the United Kingdom Broadsword class decommissioning from around 2005 through 2009, and possibly the South Korean Ulsan class, which may begin decommissioning from 2005 through 2010. Also available would be the US Oliver Hazard Perry class and the Hamilton class Coast Guard cutters (OPVs) although Uruguay has not traditionally acquired large surface combatants from the US.

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Page 37:	German Navy
Page 38:	French Navy
Page 39:	United States Coast Guard
Page 40:	German Navy
Page 41:	United States DoD
Page 42:	Republic of Korea Navy (ROKN)
Page 43:	Italian Navy
Page 44:	Royal Neatherlands Navy
Page 45:	Royal Netherlands Navy
Page 46:	United States Coast Guard
Page 47:	United Kingdon MOD
Page 48:	United States DoD
Page 49:	German Navy