Forging ahead: Asian armour update

While many countries in Western Europe are reducing their fleets of armoured fighting vehicles (AFVs), Asian militaries are moving in the opposite direction, reports Christopher F Foss.

Expanding defence budgets, regional rivalries, and burgeoning defence industrial capabilities are leading many countries in the Asia-Pacific region to not only introduce new AFVs but also to start manufacturing their own platforms.

Notably, several nations have begun to operate main battle tanks (MBTs), the marquee platform by which land forces are often judged. Indonesia recently received from Rheinmetall its first Krauss-Maffei Wegmann Leopard 2 MBT, while Singapore already has a variant of the Leopard 2 in service.

Malaysia has fielded its Polish-supplied PT-91M MBT since September 2010, while Thailand in October 2013 received the first of 49 T-84-derived BM Oplot MBTs. The Oplot is set to replace ageing M41 light tanks under a deal finalised with Ukraine in September 2011, with follow-on orders expected.

Bushmaster: From the outback to Afghanistan

While Australia has long been able to overhaul and upgrade AFVs, Thales Australia is now finding international customers for its 4x4 Bushmaster Protected Mobility Vehicle.
The Thales Australia Bushmaster Protected Mobility Vehicle (PMV) includes the APC version (front), Bushmaster Utility with two cab versions (middle) and Bushmaster ambulance (rear). (Thales Australia)

The Bushmaster was originally developed to meet the Australian Army’s specific requirement for an infantry mobility vehicle (IMV). The first low-rate-production vehicles were completed in 2002 and the platform has since been constantly developed in line with customer feedback.

The Australian Army has ordered 1,052 Bushmaster vehicles, with production still under way. Meanwhile, exports have been delivered to the Netherlands (86) and the United Kingdom (24) to meet urgent operational requirements (UOR). In December 2013 Thales announced that Jamaica had signed up for 12 Bushmasters for delivery from 2015.

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China: self-sufficiency achieved

China has Asia’s best-established AFV design, development, and production capability, offering a complete range of AFVs, from MBTs to APCs.

China North Industries Corporation (NORINCO) markets most Chinese land systems abroad, although not all AFVs developed for the People’s Liberation Army (PLA) have been released for export.
The latest MBT to be marketed by China is the MBT-3000, which has a crew of three and is armed with a 125 mm smooth-bore gun fed by an automatic loader. (NORINCO)

The original Chinese Type 59 MBT, based on the Russian T-54, and subsequent Type 69 were both built in significant numbers for the PLA and some export customers. These two models were followed by the Type 80, with a 105 mm gun, and then the Type 85, with improved armour, firepower, mobility and fire control system (FCS). The Type 85 also featured a 125 mm gun fed by an automatic loader, which enabled the crew to be reduced to commander, gunner, and driver and made for a more compact MBT.

The latest MBT to enter service with the PLA is the Type 98/Type 99, although only a few of the former were built. Both feature the Type 85's 125 mm gun and improved armour. Elements of a defensive aids system (DAS) have also been observed on some more recent vehicles.

In addition to conventional 125 mm ammunition, the Type 98/99 can also fire laser-guided projectiles. However, NORINCO is yet to offer this projectile or the Type 99 on the export market. Instead, NORINCO is concentrating its export efforts on the MBT-3000, MBT-2000, and the VT2, which are all armed with a 125 mm smooth-bore gun and carry a crew of three.

The MBT-3000 is the most advanced of these MBTs, but its combat weight of 52 tonnes is too heavy for some markets, which lack appropriate infrastructure. In contrast, the VT2's combat weight of 42.8 tonnes makes it better suited for many potential customers.

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India: pushing ahead with Arjun

MBT development and production in India has - to say the least - had a rather chequered history.

The Indian Army's Sarath IFV, a locally manufactured Russian BMP-2, is expected to be replaced by a new or upgraded vehicle in the future. (Indian Army)

Following local production of the Vickers Mk 1 MBT (renamed Vijayanta), in 1974 the Combat Vehicle Research and Development Establishment (CVRDE) began work on the Arjun MBT.

The first prototype was completed in 1984 and, after a protracted development period, the Arjun Mk I finally began entering Indian Army service in 2004 as part of an order for 124 platforms. An improved Arjun Mk II, featuring a remote weapon station, additional armour, and an advanced laser warning and countermeasure system (ALWACS), began trials in 2012.

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**Indonesia introduces Anoa**

Indonesia has been overhauling and upgrading AFVs for many years. Local company PT Pindad developed and produced the Anoa (6x6) APC, which is very similar in appearance to the widely deployed Renault Trucks Defense Véhicule de l’Avant Blindé (VAB).

An estimated 150 Anoas have been built for the Indonesian Army, while PT Pindad also offers the vehicle for export in various configurations.

Turkish company FNSS Savunma Sistemleri recently signed an agreement with PT Pindad under which it will develop new 105 mm medium tanks to meet Indonesian Army requirements.

Indonesia is also receiving 103 Leopard 2A4 MBTs and 42 Marder 1A3 IFVs from Rheinmetall, the first of which were delivered in late 2013.

**Malaysia: ready to field the new AV8**

To replace its obsolete fleet of SIBMAS (6x6) and Condor (4x4) AFVs, Malaysia selected a further development of the Turkish FNSS Savunma Sistemleri Paris (8x8) offered under the AV8 name. In 2012 Malaysian company DEFTECH was awarded a contract to supply 257 vehicles.

Although some sub-systems will be imported, the vast majority of the vehicles will be manufactured in Malaysia. The IFV variant is fitted with a one-person turret armed with a 25 mm cannon and 7.62 mm MG, while the AV8 AIFV will be fitted with a two-person Denel Land Systems turret armed with a 30 mm cannon and 7.62 mm co-axial MG.

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**Pakistan builds up MBT fleet**

Pakistan has enhanced its armour capability through a co-operation agreement with NORINCO and local firm Heavy Industries Taxila (HIT) for a phased MBT development and production programme.

This agreement included upgrading the Chinese Type 59 MBT and progressive manufacturing of Type 69, Type 85, and, more recently, the MBT-2000, also referred to as the Al Khalid.

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**South Korea: from self-sufficiency to export ambitions**

Like China, South Korea is now self-sufficient in the design, development, and production of all types of AFV.
A South Korean K21 NIFV undergoing hot weather trials in the Middle East. (Doosan Infracore)

It is estimated that Hyundai Rotem built about 1,500 of the K1 (105 mm) and enhanced K1A1 (120 mm) MBTs. These MBTs were followed by specialised ARVs, developed with assistance from Rheinmetall, and an AVLB, developed with assistance from what was then Vickers Defence Systems.

Now entering production is the K2 MBT, a brand new design fitted with a two-person turret armed with a 120 mm L/55 smooth-bore gun fed by a bustle-mounted automatic loader. The K2 MBT also features an advanced armour system and defensive aids systems.

To supplement the currently deployed Doosan Infracore Korean Infantry Fighting Vehicle (KIFV), Doosan developed the K21 Next-generation Infantry Fighting Vehicle (NIFV) which provides a step change in capability. Now in service, the K21 NIFV has a crew of three and carries nine dismounts. It is fitted with a two-person turret armed with a 40 mm cannon and a 7.62 mm co-axial MG with a pod of two ATGWs mounted externally on the left side of the turret.

A complete K21 family is under development following the completion of a driver training vehicle and ARV.

Like China, South Korea is following international trends in wheeled vehicles. Doosan, Rotem, and Samsung Techwin have all developed families of 6x6 and 8x8 vehicles.
Singapore: self-sufficient in most fields

STK started developing self-sufficiency in AFVs by overhauling and upgrading its French-supplied AMX-13 light tanks and US-supplied M113 series APCs. This phase was followed by the design, development, and production of the Bionix IFV, now in service with the Singapore Armed Forces (SAF).

The Singapore Technologies Kinetics Terrex 8x8 Infantry Carrier Vehicle, seen here with a remote weapon station armed with a 40 mm automatic grenade launcher and machine gun. (STK)

The IFV variant is deployed with a two-person turret armed with a 25 mm or 30 mm cannon, and fitted with a locally produced cupola armed with a 40 mm automatic grenade launchers and .50 MG. ARV and AVLB models are also in service.

Bionix was followed on the production line by the Bronco All Terrain Tracked Carrier (ATTC), which has been built in large numbers for the SAF in numerous configurations. The Bronco was further developed for the British Army, which renamed it the Warthog.

Now in quantity production for the SAF is the Terrex 8x8 Infantry Carrier Vehicle, the first AFV to be deployed by the Singapore Infantry. More specialised versions have already been deployed and quantity production is still under way.

STK teamed up with US company Science Applications International Corporation (SAIC) to offer the Terrex for the US Marine Personnel Carrier (MPC) programme, renamed ACV Increment 1.1 after the MPC merged with the US Marine Corps' Amphibious Combat Vehicle (ACV) programme in the fiscal year 2015 budget.
According to Pentagon officials, the ACV Increment 1.1 will be an off-the-shelf solution, so the Terrex remains in the running against three other platforms.

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