

NAVY NEWS

ISSUE 03 2015

ALL IN THE FAMILY

RSN personnel serve with their loved ones



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GIVING STRENGTH TO OUR NATION

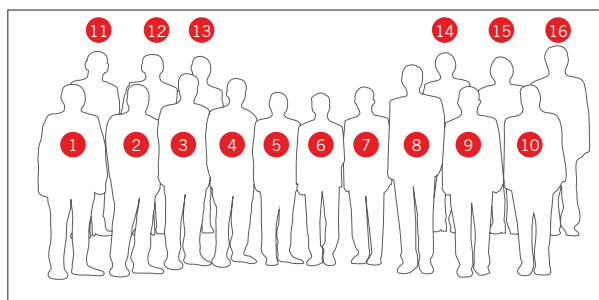
The RSN organises
SAF50@Istana

A HELPING HAND

Socio-civic outreach
on our shores and beyond

SAF
50

NAVAL STAFF MEMBERS 2015



Front (L-R):

- ① ME6 Phui Peng Sim, Master Chief, Navy*
- ② COL Tan Hong Teck, Commander, Naval Diving Unit
- ③ ME7 Low Yong Joo, Head, Naval Logistics
- ④ RADM Lew Chuen Hong, Commander, Fleet
- ⑤ RADM Jackson Chia, Chief of Staff – Naval Staff
- ⑥ RADM Lai Chung Han, Chief of Navy
- ⑦ RADM Timothy Lo, Head, Naval Operations
- ⑧ RADM Frederick Chew, Commander, Maritime Security Task Force
- ⑨ COL Alan Goh, Head, Naval Plans
- ⑩ COL Saw Shi Tat, Head, Naval Personnel

Back (L-R):

- ⑪ COL Victor Huang, Head, Naval Intelligence
- ⑫ COL Alex Yit, Head, Naval Training
- ⑬ COL Gerald Heng, Commander, Maritime Training and Doctrine Command
- ⑭ COL Ngong Boon Kheng, Head, Naval Inspectorate
- ⑮ ME7 Andy Tay, Commander, Naval Logistics Command
- ⑯ SLTC (Dr) Chow Weien, Chief, Naval Medical Officer

* ME6 Phui Peng Sim handed over the appointment of Master Chief Navy to ME5 Richard Goh on 30 September.

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Photo by
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The mission of the RSN is to enhance Singapore's peace and security through deterrence and diplomacy, and should these fail, to secure a swift and decisive victory over the aggressor at sea. The RSN will ensure Singapore's seaward defence, secure our sea lines of communication, and maintain a high level of operational readiness and a broad spectrum of capabilities to support our national interest.

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RADM Lai Chung Han
Chief of Navy

Not Just One Best Ship

This year, four Best Unit Awards were presented to RSN units at the SAF Day Parade – RSS *Tenacious* as the Best Fleet Unit, RSS *Resilience* as the Best Maritime Security Unit, the Systems Readiness Engineering Centre (Weapons) as the Best Naval Engineering and Logistics Unit and RSS *Vigilance* as the Best Naval National Service Unit.

BRAVO ZULU to them!

Like many, I was immensely proud to see our four Commanding Officers receive the awards. For many years, we had only one award – the Best Ship Award – presented on 1 July. It was always difficult to choose the best out of the many deserving ships and submarines in the Fleet and MSTF to receive that honour, especially since they had different roles and functions. And we did not have awards for shore units.

I am glad that we were able to publicly recognise more winning RSN units this year – not just on SAF Day, but also on Navy Day. It is precisely because we have many excellent ship and shore units that the RSN can punch above our weight. It is not just the sharp end of our units at sea, but also the strong support from our shore units.

Not Just About Mission Success

When I took over as CNV in August last year, I had asked the MINDEF/SAF leadership to judge the RSN not just by our mission success, but by the character of our effort and endeavour. This remains my firm conviction.

Recently, we recognised both our retirees and our long-serving personnel, who have given the best years of their lives to the Navy. One of them is ME3 M Thevanindrian, an Engineering Inspectorate from the Force Readiness Squadron, who has served with distinction for 40 years. His love for his job and pride in being part of the Navy family is something for us to emulate.

Character is best seen in the abiding commitment of our people against the odds and over the years. It is a commitment that outlasts changing circumstances and growing challenges. This is the strength of our enduring spirit that will take us to RSN50 in 2017 and beyond. We have much to look forward to in the years to come!

QUICK REP

7th Naval Warfare Specialisation Course

29 military experts graduated from the 7th Naval Warfare Specialisation Course, which was conducted from 23 Mar to 12 Jun. ME3 Teo Chee Sern, ME3 Koh Lay Teng Ireynn, ME3 Yeo Kwee Hian and ME2 Ong Say York emerged as top students for their respective expertise areas of C2, weapons, underwater and electronic warfare.



MINDEF Experiential Programme

Some 100 students from various junior colleges spent a day of their June holidays with the Navy as part of the MINDEF Experience Programme 2015. The students got a chance to tour landing ship tank RSS *Endurance* and had a dialogue session with Fleet Commander COL Lew Chuen Hong.



Regional Maritime Security Practitioner Course 2015

The RSN and the S Rajaratnam School of International Studies came together for the fifth time to co-organise the Regional Maritime Security Practitioner Course (RMPC) 2015 from 28 May to 12 Jun. 86 participants from 22 nations and 11 national agencies exchanged views on common maritime security issues and discussed on areas of cooperation between navies and enforcement agencies in addressing maritime security threats.



Permanent Secretary (Defence Development)'s Visit to Force Readiness Squadron

Permanent Secretary (Defence Development) MG(NS) Ng Chee Khern, held a Senior Management Dialogue Session with personnel from Force Readiness Squadron (FRS), Naval Logistics Command on 10 Jun. He was also briefed on FRS' organisation and engineering support capabilities which supports the RSN in achieving mission success.

Wheels@Ubin

100 wheelchair users from Changi Sailing Club visited Pulau Ubin on 26 Jun. Sailors from 191 Squadron's Fast Craft Training Unit ferried them to Pulau Ubin as part of an SG50 community project, Wheels@Ubin. The wheelchair participants, who were from the Asian Women's Welfare Association, Hand-Cycling Association of Singapore and Society for the Physically Disabled, toured Pulau Ubin assisted by volunteers, which included personnel from 191 Squadron. Read more about it on page 10.



SAF Day Re-dedication Ceremony

Every year, Singapore Armed Forces (SAF) Day Re-dedication Ceremonies are organised for Operationally Ready National Servicemen to come together to re-affirm their pledge of loyalty and dedication to the SAF and the nation on 1 Jul. This year, the Naval Diving Unit (NDU) organised one of four ceremonies. Then Second Minister for Defence Mr Lui Tuck Yew and Chief of Navy RADM Lai Chung Han led the re-dedication ceremony held at the Singapore Discovery Centre for the West Zone.



SAF Day Parade

The SAF Day Parade was held at SAFTI Military Institute on 1 Jul. Personnel from the NDU and the Maritime Training and Doctrine Command (MTDC) marched in parade. Defence Minister Dr Ng Eng Hen presented the awards for Best Units, including the Best Fleet Unit, Best Maritime Security Unit, Best Naval Engineering and Logistics Unit and Best Naval National Service Unit. Read more about it on page 16.



SAFSA Inter-Formation Table Tennis Competition

The RSN trounced Combat Service Support Command in the finals of the SAF Sports Association (SAFSA) Inter-formation Table Tennis Competition held on 27 Aug at Amoy Quee Camp's Multi-Purpose Hall.



Littoral Mission Vessel Launching Ceremony

The RSN launched the first Littoral Mission Vessel (LMV) *Independence* on 3 Jul. The LMVs will replace the existing Fearless-class patrol vessels. Read more on pages 42 and 44.

SAFSA Inter-Formation Badminton Competition

Players from the RSN Badminton Team fought hard in the inter-formation badminton competition held on 31 Jul at Civil Service Club. ME2 Alvin Tan and ME3 Ricky Ng managed to clinch first place in the Masters Singles and Senior Singles categories respectively.

SAFSA Awards Ceremony

The annual SAFSA awards ceremony was held at Orchid Country Club on 3 Jul. The RSN managed to clinch overall 2nd runner-up for FY14/15. Then Chief of Defence Force LG Ng Chee Meng and Chief of Air Force MG Hoo Cher Mou presented the awards to the recipients.

73rd MIDS Commissioning Parade

61 naval officers from the 73rd Midshipmen batch were commissioned at the SAFTI Military Institute on 19 Jul. 2LT Lee Ken Chun was awarded the Sword of Honour.



Naval Junior Officers Course

17 naval officers graduated from the 13th Naval Junior Officers' Course conducted from 2 Mar to 2 Aug. The course trains young naval officers in navigation and seamanship. CPT Edwin Ong and CPT Justin Kwan were awarded top and distinguished graduates respectively.

MTDC 2nd Anniversary

MTDC commemorated its second anniversary at RSS Panglima-Changi Naval Base on 21 Jul. Tokens of appreciation were presented to thank pioneers of the previous training command for their past contributions. 10 pioneers received the newly launched Guardian of Standards award in recognition of significant contributions to the formation.

SAF50@Istana

SAF50@Istana, which was held on 26 Jul, played host to more than 21,000 people. The event was organised to recognise the contributions of our pioneers, servicemen and their families. Bravo Zulu to Fleet for the successful organisation of the event. Read more about it on page 16.



09/15 Senior Military Experts Appointment Ceremony

24 military experts (MEs) from the RSN were appointed senior MEs, together with 101 counterparts from the SAF, on 28 Jul. The appointment ceremony, held at the SAFTI Military Institute, marked the completion of the Military Domain Expert Course 2. ME4 David Mohan was awarded the Sword of Merit by then Chief of Army MG Perry Lim.

SAF Scholarship Awards Ceremony

A total of 11 RSN personnel received the SAF Scholarship and the SAF Merit Scholarship from Minister for Defence Dr Ng Eng Hen at an awards presentation ceremony held at the Istana on 29 Jul. 2LT Russell was also presented the President's Scholarship on 14 Aug.



National Day Parade

NDU and MTDC trainees made up the Navy Guard of Honour and marching contingent respectively at this year's National Day Parade held at the Padang on 9 Aug. Naval assets were also on display in the mobile column and the aerial flypast. Read more about it on page 30.

Chief of Defence Change of Command Ceremony

LG Ng Chee Meng handed over the reins to MG Perry Lim in a Change of Command ceremony at SAFTI Military Institute on 18 Aug.



RSN-NTU-USNA Student Exchange Programme

On 26 Aug, memorandums of agreement was signed between the RSN, Nanyang Technological University (NTU) and the United States Naval Academy (USNA) to formalise a student exchange programme for RSN officers and senior military experts studying at NTU and USNA midshipmen.

MINDEF Pride Day

The Naval Logistics Command (NALCOM) received the Minister for Defence for the second consecutive year at the MINDEF Pride Day award presentation ceremony held at the Singapore University of Technology and Design on 2 Sep. Force Generation Squadron was also awarded the Minister for Defence Awards (Innovation).

Long Service Award

Chief of Navy RADM Lai Chung Han presented the Long Service Award to 225 navy personnel for their service, ranging from 20 to 40 years, at RSN Central Mess in Changi Naval Base on 3 Sep.



Specialist Cadet Graduation Parade

25 naval divers and sea soldiers, together with another 1,130 specialist cadets from across the SAF, graduated from the 24/2015 Specialist Cadet Course in a parade on 22 Sep held in Pasir Laba Camp. SCT Tee Qian Jiang was awarded the Golden Bayonet.

Master Chief Navy Change of Appointment Ceremony

In a ceremony held at the Victory Hall in the Naval Military Experts Institute on 30 Sep, ME5 Richard Goh took over from ME6 Phui Peng Sim as Master Chief Navy.



International Exposition of Team Excellence Symposium (IETEX)

SJO Power from the RSN clinched the Diamond award at the IETEX 2015, organised by Singapore Productivity Association on 9-11 Sep. Two other teams from the RSN, Team Analyser and Team Rectifier, also received the 2 Stars Award and 3 Stars Award respectively.

WHERE WE'VE BEEN



CARAT Singapore 2015

The United States Navy and RSN conducted the 21st annual Cooperation Afloat Readiness and Training (CARAT), which was held from 13 Jul to 24 Jul in the South China Sea. The exercise included a combined torpedo firing and the inaugural deployment of unmanned aerial vehicles.



Midshipman Ship Training Deployment

Trainees from the 74th Midshipman Course and 11th Military Domain Expert Course 1 set off on 29 Aug for a six-week Midshipman Sea Training Deployment aboard landing ship tank RSS *Endeavour*. They called into ports like Sattahip, Thailand; Tomini, Indonesia and Vishakapatnam, India.



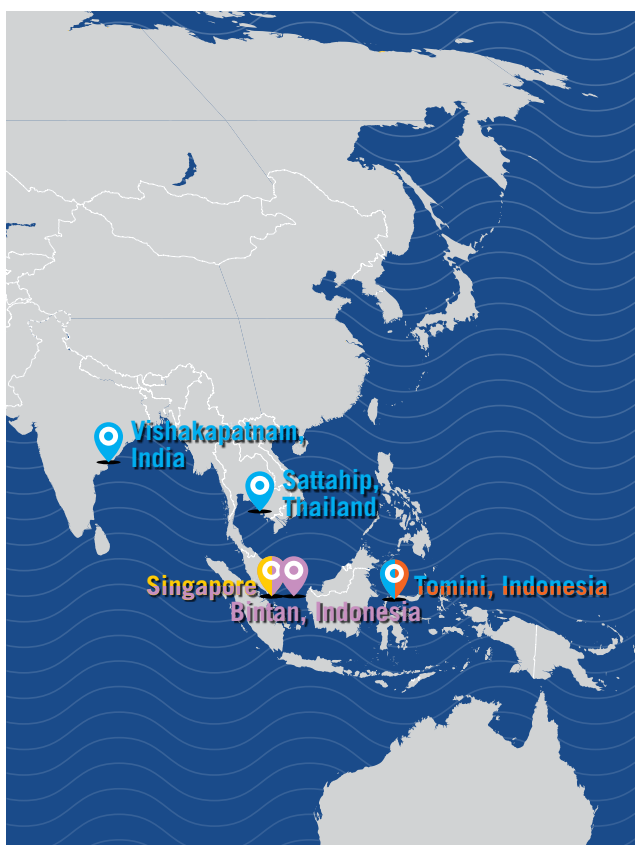
Western Pacific Mine Countermeasure Exercise

The RSN and Indonesian Navy co-hosted the sixth Western Pacific Mine Countermeasure Exercise from 25 to 31 Aug. More than 800 personnel, 13 ships and five underwater vehicle teams from 16 countries participated in this year's exercise. The exercise culminated in a five-day mine-hunting and mine-sweeping sea phase in the Singapore Strait and the waters off the Indonesian island of Pulau Bintan.



Operation Surya Bhaskara Jaya

RSS *Endeavour* took part in socio-civic exercise Operation Surya Bhaskara Jaya from 15 to 18 Sep in Tinombo, Tomini, Sulawesi, Indonesia. More than 260 RSN personnel worked together with their counterparts from the Indonesian Navy to provide primary health and dental care to residents of Tinombo, and to carry out restoration work for some of the local schools. In addition, *sembako* comprising nine essential items like rice and oil were presented to the people from Tinombo. Read more about it on page 20.



Courtesy calls on CNV

Australia

Commodore Peter Laver
Chief of Staff, Navy Strategic Command,
Royal Australian Navy

India

Admiral R. K Dhowan
Chief of Naval Staff,
Indian Navy

Indonesia

Admiral (Retired) DR Marsetio
Senior Advisor to Cooperating Minister for
Maritime Affairs,
Indonesian Navy

Vice Admiral Widodo
Deputy Chief,
Indonesian Navy

New Zealand

Commodore Dean McDougan
Deputy Chief of Navy,
Royal New Zealand Navy

Thailand

Admiral Kraisorn Chanswanich
Commander-in-chief,
Royal Thai Navy

United States of America

Admiral Scott H. Swift
Commander, Pacific Fleet,
United States Navy

GIVING STRENGTH TO OUR NATION

*Story and photos by Jonathan Ryan
Additional photos by Harry Sin*

The Istana opened its doors to families and supporters of the Singapore Armed Forces at SAF50@Istana on 26 July, which was held to thank them for their support of the SAF.





3

- 1** About 21,000 members of the public, Singapore Armed Forces (SAF) personnel and their families attended the event, which showcased exhibitions such as gifts from foreign armed forces. These were displayed at the Istana's state and reception rooms, and illustrated bilateral relations the SAF has forged over the years.



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- 2** President Dr Tony Tan interacted with SAF personnel, such as those involved in key operations like the search for Air Asia flight QZ8501. He also spoke with families who have multiple generations serving in the SAF.

- 3** Taking a photo break from the wide range of activities planned for servicemen who brought their families to the Istana. Kids could participate in games and activities, such as flight and ship simulators and photo booths.



5

- 4** Visitors to SAF50@Istana could picnic on the lawn while enjoying performances by the SAF Band, the Music and Drama company and National Cadet Corps precision drills. In addition, there were also exhibits on SAF's contributions and capability development over the years.

- 5** Chief of Navy RADM Lai Chung Han put the last bottle cap in place to officially unveil a structure by the Maritime Security Task Force. The structure, made out of 13,000 bottle caps, was built to commemorate 20 years of protecting Singapore's coastal waters, features Singapore's skyline with a patrol vessel guarding Singapore's waters in the forefront.

TOP OF THE CLASS

Story by S Mitra and Jonathan Ryan

Photos by S Mitra and Harry Sin

To better recognise the best in the RSN, four Best Unit awards were presented to RSN units at this year's SAF Day Parade. Being awarded for the first time were the Best Fleet Unit, Best Maritime Security Unit, Best Naval Engineering and Logistics Unit and Best Naval National Service Unit.

Yield to none

Frigate RSS *Tenacious* took home the Best Fleet Unit Award. It was a proud win for the crew, who participated in counter-piracy mission, Operation Blue Sapphire (Maritime) last year.

The tenacity demonstrated by the crew during the operation was one of the main factors that led to their win this year.

"The deployment to the Gulf of Aden took a total of 103 days. We had to deal with high sea state and temperatures as high as 41°C, but the ship – even personnel from the Air Force and command team – came together

to overcome the challenges," said LTC Ho Jee Kien, who was the previous commanding officer of RSS *Tenacious*.

The three and a half month deployment was broken up by calls into various ports, such as Muscat in Oman and Fujairah in the United Arab Emirates. Djibouti, in Africa, was meant to be one such port – a welcome stopover for the crew to spend a few days on shore. But a few days before RSS *Tenacious* was due to call in Djibouti, a bombing took place in one of the restaurants there.

"In the end we did not dock at Djibouti but stopped at an anchorage to take on stores. We ended up spending 29 continuous days at sea!" continued LTC Ho.

Looking ahead, the ship's executive officer LTC Eng Cheng Heng, said that while awards are great, the ship's priority is to do the best it can for the Navy.

LTC Eng said: "We just ensure that our ship can contribute to the RSN. The Best Fleet Unit award is a bonus for us!"





W

Excel in readiness

ME2 Suresh Chris understands the importance of keeping things ship-shape and ready. The senior assistant engineer from the Systems Readiness Engineering Centre (Weapons), or SREC (Weapons), is part of this year's Best Naval Engineering and Logistics Unit, the first time it has been awarded.

The 31-year-old's job is to prepare, maintain and enhance the readiness of weapons on RSN ships, which include the 25mm Typhoon gun and the 76mm OTO Melara gun. These guns are meant to defend the ship against surface and air threats.

Over the past year, the SREC has prepared RSN ships for many firings. This included an Aster missile firing at the multilateral Rim of the Pacific Exercise off the coast of Hawaii, a torpedo firing at Cooperation

Afloat Readiness and Training exercise (Ex CARAT Singapore) with the United States Navy, and more than 100 gunnery shoots.

"I am heartened by the number of successful firings by the ships that we in SREC (Weapons) have prepared," said ME2 Suresh.

ME2 Suresh, who previously served on board mine countermeasure vessel RSS *Bedok* and frigate RSS *Steadfast* as a weapon systems operator, said it is important for the crew to have full confidence in their ships' capabilities.

He attributes his unit winning the Best Naval Engineering and Logistics Award to their competency and commitment. ME2 Suresh said: "I feel proud and honoured that we have won the award this year. And this being the first time the award is being given out makes it even better."

We will endeavour

Whenever patrol vessel RSS *Resilience* goes out to sea, ME1 Hoo Chang Wei takes up his position at the Combat Information Centre, manning the weapon control systems for the 76mm OTO Melara gun. As one of the weapons control system operators on board the ship, he is also trained as a lookout, helmsman and bravo gunner.

“The award is a recognition of the entire ship’s efforts to excel in everything we do. As currency assessments are part of the criteria, even as a weapons control system operator, I give my best. This is because everyone plays a part in us winning the Best Maritime Security Unit award, no matter how small the effort,” says the 23-year-old, who has served on board the patrol vessel for two years.

At last year’s Ex CARAT Singapore, RSS *Resilience* managed a direct hit on a towed-target, measuring just 2m by 0.5m – a major achievement for the gunnery department.

Beyond operations, RSS *Resilience* together with sister ship RSS *Dauntless* were deployed for a ceremonial sailpast, as part of the state funeral for the late Mr Lee Kuan Yew. Braving the heavy rain, the crew of RSS *Resilience* took part in the ceremonial send-off, paying tribute to our founding Prime Minister, together with the rest of Singapore.

Summing up his crew’s pride, ME1 Hoo said: “While we did not do all that we did just for the award, it does feel good after the challenges we overcame together as one.”





Alert and vigilant

Missile corvette RSS *Vigilance* is one of the RSN ships to be fully operated by Operationally Ready National Servicemen (NSmen) and is the proud winner of the inaugural Best Naval National Service Unit award.

“We have known each other since our time as Full-time National Servicemen and as Navy Regulars. We have built closeness and camaraderie, bonded by our National Service story” said LTC (NS) Kelvin Lim, Commanding Officer of RSS *Vigilance*.

When they report for annual in-camp training, the NSmen on board RSS *Vigilance* make sure they are ready for the task at

hand by putting in extra hours into training. These additional efforts enhance the crew’s ability to work together to make their ship operationally ready.

“The first few times we were very rusty in our procedures and we found it difficult to execute skill we used to find second nature. However with much practice, we reinforced and improved on what we learnt many years ago,” he added.

NSmen is a critical part of the SAF’s full force potential, and the NS crew of RSS *Vigilance* intend to continue serving as such.

SERVING THE PEOPLE, DEFENDING THE SEAS

*Story and photos by Jonathan Ryan
Additional photos by Yong Shu Fui*

Besides defending Singapore's sea lines of communication, the RSN reaches out to help the community. Navy News takes a look at the hearts it has touched.

“ These outreach efforts are important as we show the public that we do not only conduct operations, but we are here to serve the people as well. ”

– ME2 Terence Tay

Personnel from the Fast Craft Training Unit helped ferry 100 wheelchair users from mainland Singapore to Pulau Ubin for a day out, as part of Wheels@Ubin.

Paralympian hand cyclist Dr William Tan was the first man to complete the North Pole marathon on wheelchair in Antarctica. He represented Singapore at the 1988 Paralympics in Seoul, completed at least 60 ultra-marathons around the world, and hand-cycled from London to Paris – a distance of 500km – in four days.

But until 26 June, he had never set foot on Pulau Ubin.

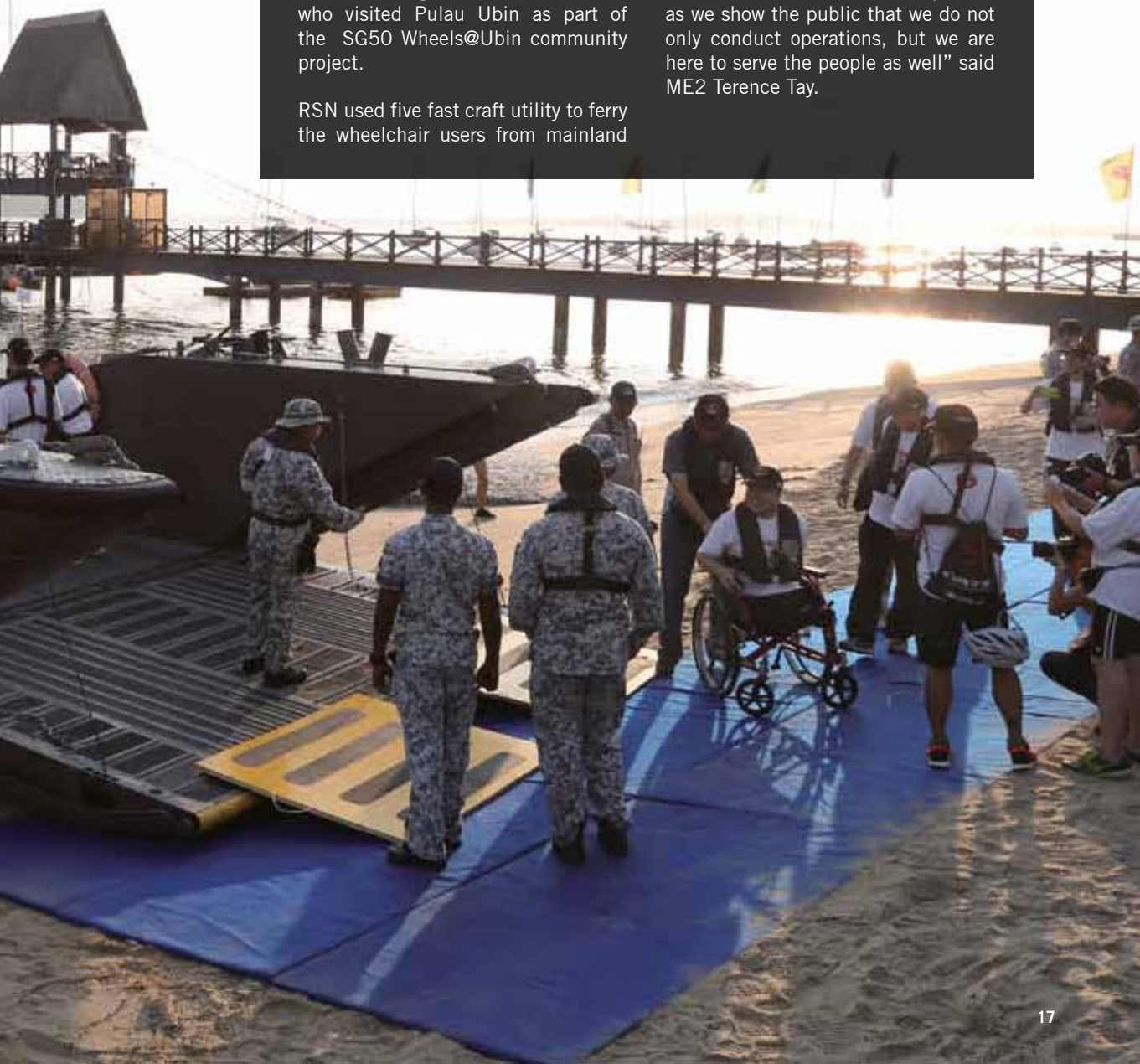
He was among 100 wheelchair users who visited Pulau Ubin as part of the SG50 Wheels@Ubin community project.

RSN used five fast craft utility to ferry the wheelchair users from mainland

Singapore, across the East Johor Strait to Pulau Ubin. Commercial bumboats usually make the 10-minute trip, but these bumboats do not have the facilities to accommodate wheelchair users.

It was the first time the wheelchair users, from the Asian Women's Welfare Association (AWWA), Hand-Cycling Association of Singapore (HAS) and Society for the Physically Disabled (SPD), had visited the island.

"These outreach efforts are important as we show the public that we do not only conduct operations, but we are here to serve the people as well" said ME2 Terence Tay.





It was the first time at Pulau Ubin for many participants in the Wheels@Ubin event, who explored the island through either a walking or hand cycling route.



Bringing people places

46-year-old wheelchair user Mr Subramaniam was very excited as he arrived on Pulau Ubin for the first time. “Events like these bring great motivation and encouragement to me. Without the help of the Navy, this would not be possible,” said the business analyst.

Participants explored the island via either a walking or hand cycling route. The routes were peppered with performances and activities, such as a *Dikir Barat* performance by students from Republic Polytechnic, and a chance to try out silk-screen painting.

The event, held in conjunction with SG50, was co-founded by Mr Dennis Quek and Mr Wilson Ang. The duo wanted to preserve and enhance Pulau Ubin’s rustic character and natural environment, while providing access for the general public.

Members of the Naval Diving Unit volunteered with Willing Hearts to prepare, pack and deliver food to needy households.

“We chose Pulau Ubin because it is not entirely accessible. We want to raise awareness of the inaccessibility of certain places in Singapore. Through this, we can build a more inclusive society,” said Mr Quek, who is the director of Republic Polytechnic’s Centre of Innovation for Supply Chain Management.

The RSN shares his belief; this was not the first time the Navy had brought new experiences to the less fortunate.

As part of the Navy@Vivo and SAF50@Vivo events in 2014 and 2015 respectively, the RSN took hearing-impaired students from

the Canossian school and the Singapore School for the Deaf (SSD) on a three-hour ride on a landing ship tank, as it transited from Changi Naval Base to berth at VivoCity.

During the transit, the students were brought on a tour of the ship, where they were introduced to places such as the bridge, galley and combat information centre.

SSD student Ryan Cheaw conveyed through sign language that when he found out about the sailing, he was very excited as he had never done so before.

Trainees from the Advanced Specialisation Course also collaborated with Willing Hearts, which provides over 3000 meals for the needy every day.

An RSN personnel giving a helping hand to one of the wheelchair participants after disembarking from the RSN's fast craft utility.



Personnel from the RSN and United States Navy volunteered at the Salvation Army's Peacehaven nursing home as part of the shore phase during CARAT Singapore 2015

Full tummies, full hearts

The Navy brings new experiences to people when it can, but sometimes the less fortunate just require their basic needs met.

For this, RSN personnel have teamed up with non-profit organisation Willing Hearts, a soup kitchen that prepares and delivers food to those who cannot afford their own. They provide

over 3,000 meals every day to the needy across the island.

Men and women from various units have worked with Willing Hearts, including trainees from the Advanced Specialisation Course and divers from the Naval Diving Unit. They washed, cut and helped to cook food, and then packed and delivered the prepared lunches to the needy.

"The Navy guys are very good at work. Be it kitchen work or loading packets of food into the car, they can do it very fast and efficiently. Most importantly, they did it with a smile," said Mr Tony Tay, organising chairman of Willing Hearts.

Lighting up smiles

Sometimes, all it takes to make a difference is a warm smile and a hand to hold.

Personnel from the RSN and the United States Navy volunteered at the Salvation Army Peacehaven Nursing Home during the shore phase of CARAT Singapore 2015. They cleaned the lodging area of the nursing home and equipment such as the home's ambulances. The sailors also interacted with the elderly, sharing stories and play games with them.

Navy personnel have also reached out to children and adults with intellectual disabilities, such as those at service centre MINDSville@Napiri.

Earlier this year in January, men and women from the 185 Squadron spent the day interacting with MINDSville@Napiri residents, playing games, giving out prizes and putting up performances. They set up a photo booth, allowing the younger residents to don Navy uniforms and have their photo taken.

ME1 Darren Wong said: "I am happy to spend time with the residents here, and I could feel their joy from their heart-warming smiles and the appreciation of their family members. Through this event, I really learned that happiness is doubled when shared, especially when doing something worthwhile."

A HELPING HAND

Story by Clara Lock

Photos by Clara Lock, Jonathan Ryan and Yong Shu Fui and courtesy of RSS Endeavour

In Northern Sulawesi's coastal village of Tinombo, medical care isn't always easily accessible. So the RSN brought it to the village in this year's TNI AL-led socio-civic mission, Operation Surya Bhaskara Jaya (Ops SBJ).



The crowd had gathered by six in the morning at Tinombo's Raja Tombolotutu hospital, even though the clinic was only meant to start at nine.

There were young mothers with babies in their arms, old women being helped along by husbands or sons, old men shuffling through the queue with a limp. Some had travelled up to 100km from the surrounding villages, on foot, motorcycle or the family van.



Every day, fast craft would ferry patients to RSS Endeavour, where minor surgeries such as hernias, cleft lips and lipomas were carried out.



A total of 262 SAF personnel contributed to Ops SBJ, which was conducted in Tinombo, a coastal village in Northern Sulawesi, Indonesia.

They had come to seek free primary health care, dental treatment, and minor surgeries which were being offered by the RSN and Indonesian Navy (TNI AL). These services were provided as part of the 64th Operation Surya Bhaskara Jaya (Ops SBJ) a socio-civic mission led by the TNI AL.

To deliver the medical care, landing ship tank RSS *Endeavour* called into Tinombo, which was the second of three ports on the Midshipman Sea Training Deployment for the 74th Midshipman Course/ 11th Military Domain Expert Course.

The primary health care and dental treatments were delivered at the hospital, while surgeries were carried out on RSS *Endeavour*.

Besides medical services, RSN personnel painted two schools and performed dental screenings and oral health education on

the students there. They also distributed sports equipment to the two schools, and 1,000 boxes containing basic essential supplies such as rice, salt, sugar and cooking oil to local residents.

Making a difference

It made a difference to a community used to getting by with less.

Most people in Tinombo work as farmers, fishermen or construction workers. According to local hospital officials, the average family has four children, and gets by on 500,000-1,000,000 Rupiah a month, or about S\$50-100.

When most of the income goes to meeting the family's daily needs, there isn't much left over for medical treatment of conditions that are not life threatening.

General surgeon MAJ (Dr) (NS) Chong Chee Keong operated on a 53-year-old man with a 8cm-long lipoma, or growth of fatty tissue, on the back of his neck.

The lump was not painful, merely uncomfortable when he laid on his back – so the patient had lived with it for the past six years as it slowly grew in size.

MAJ (Dr) (NS) Chong said: "I'm happy to be able to help. The patient was probably worried because the lump kept getting bigger, so removing it helped relieve his stress."

He added that as the lump was located near the patient's spine, there was a risk that if the lump grew bigger, it could compress his nerves and cause pain.



1,000 boxes containing basic essential supplies such as cooking oil, rice, salt and canned fish were distributed to the villagers of Tinombo.



A total of 10 surgeries were performed in the Rapidly Deployable Maritime Containers, located on RSS Endeavour's flight deck.



Surgery at sea

The lipoma removal was one of ten surgeries conducted in the Rapidly Deployable Maritime Containers (RDMC), which were used for the first time during Ops SBJ. Two containers were mounted on RSS *Endeavour's* flight deck, containing an operating theatre and an intensive care unit.

The containers are designed according to a matchbox concept, and feature overlapping layers. When in use, they can be expanded to about three times their original size.

MAJ (Dr) (NS) Chong Chee Keong, who used to be a senior consultant at Changi General Hospital before moving to private practice at Mount Elizabeth Hospital (Novena), said that the RDMC is similar to a hospital operating theatre in terms of temperature, light, space and equipment available.



Changing lives

Although Indonesia offers health insurance to its citizens, the nearest hospital where they can receive surgical treatment is in Parigi, about 220km away by road.

Some locals cannot afford to make the journey, or lack a place to stay when they are there, said Dr Andika Sulaiman, a doctor

who works in Palasa village, about 24km from Tinombo.

One such person was 13-year-old Sadri, who suffered from a cleft lip, a congenital condition that affects about one in 500 Asians.

The condition is caused by an incomplete fusion of the face, resulting in abnormalities of the lips, nose and palate. For Sadri,



CPT (Dr) Pravin Anand was one of two RSN medical officers providing primary health care to patients in Tinombo. Common conditions were colds, joint pains and gastritis.



SAF dentists provided dental screenings and conducted oral health education for students, reinforcing the importance of brushing their teeth and the correct techniques to do so.



Tinombo, which is located along the Northern coast of Sulawesi, is home to about 35000 people

it appeared as a break in his upper lip, just under his nose.

Sadri could speak, goes to school, and wants to be a doctor, said his father Mr Alwin, 43. But he lacked the confidence when speaking to his friends, especially to girls, said his father, a cacao farmer.

Plastic surgeon LTC (Dr) (NS) Chong Si Jack performed the reconstructive surgery on Sadri, reorienting the abnormally inserted muscles in his face.

It would help Sadri's speech, appearance and swallowing, said LTC (Dr) (NS) Chong, as he watched the boy sip water, recuperating before fast craft took him back to shore.

LTC (Dr) (NS) Chong added, with a smile: "This is the first time he is drinking through a straw."

Learning through service

A team of active servicemen and Operationally Ready National Servicemen performed a total of 21 surgeries over two days.

For some, such as Full-Time National Serviceman 3SG Kwek Shao Yang, it was his first time as a scrub nurse in the operating theatre.

Although he has spent four days shadowing the nurses in Tan Tock Seng Hospital's Operating Theatre, the medic was still nervous at the start of the operation.

But CPL (NS) Kumerasun Shen Long, a scrub nurse at Tan Tock Seng Hospital, guided 3SG Kwek along, showing him how to prepare the equipment for surgery while keeping them sterile. 3SG Kwek also assisted surgeon MAJ (Dr) (NS) Chong in the lipoma surgery.

3SG Kwek said: "I'm more confident of my skills after helping out with this surgery. As a medic, sometimes we need to do simple dressings which require a sterile environment. I don't always get a chance to practice that."

"It's a sense of accomplishment, being able to help people through surgery."

“It's a sense of accomplishment, being able to help people through surgery.”

– 3SG Kwek Shao Yang

A COMPLETE SMILE

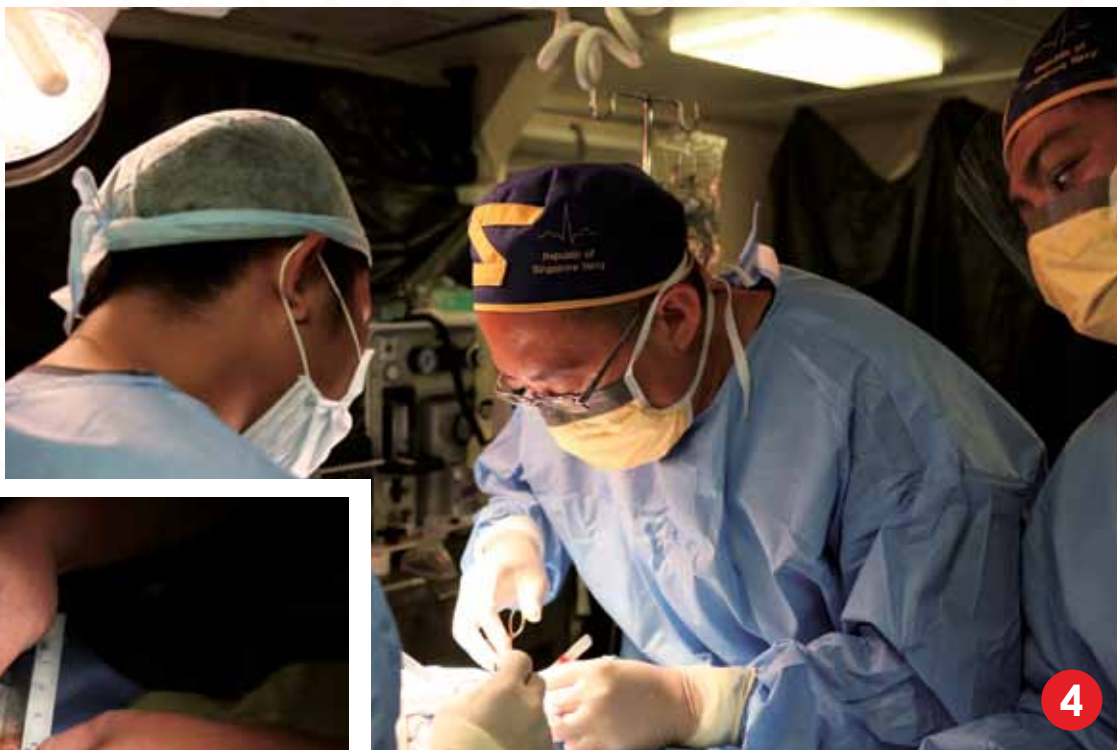
Five-year-old Syahrini was born with a cleft lip, a congenital condition that appeared as a break in her upper lip. This is how plastic surgeon LTC (Dr) (NS) Chong Si Jack reconstructed her smile.



1 Plastic and reconstructive surgeon MAJ (Dr) (NS) Matthew Yeo screens Syahrini to make sure she is fit for surgery. "We will do the operation today, okay?" he asks her father. He nods his consent.

2 Syahrini is quiet during the wait for surgery, but she cries as her father, Mr Syahrin, carries her to the operating table.





3 LTC (Dr) (NS) Chong marks out Syahrini's lips before surgery. He will repair her oral muscles and correct her left nostril. Her nostril is much wider and flatter than normal, so LTC (Dr) (NS) Chong will narrow the base of the nose and sharpen the tip.

4 When the surgery is over, LTC (Dr) (NS) Chong is pleased with the outcome. "She won't look perfect, but from far you can't tell," he said.

5 That evening, fast craft utility ferried Syahrini and the other patients back to shore. The stitches will come off in a week, and Syahrini can return to school with a complete smile.

BACK TO SCHOOL

Midshipmen taught the Tinombo schoolchildren songs, dances and games, and took away some lessons of their own.

Midshipmen played games, danced, and sang songs with the students of two local schools. They also distributed stationery packs and sports equipment such as badminton rackets and soccer balls.



When the midshipmen went to primary schools Inpres Tinombo and SDN Tinombo, it felt as if the whole village of children was there as well.

Students from other schools and the surrounding homes swarmed the two schools to play, dance and sing with the midshipmen.

Language barriers and inhibitions melted away in the interaction, said MID Loo Bin Hui, who taught the children *Semoga Bahagia*. The song, which is commonly sung during Children's Day in Singapore, is about pursuing happiness.

"Whatever I couldn't convey with Bahasa Indonesia, I substituted with hand gestures," said MID Loo.

And the students responded with enthusiasm that did not waver, even when singing the song for the fifteenth time.

"The kids' attitude to learning is different. They take every moment as a learning opportunity, and don't take anything for granted," said MID Yap Joon Woon.

It was a timely reminder at the halfway mark of a six-week sail that was meant to teach them navigation, engineering and seamanship skills. There was always something new to learn, a skill to refine, and sometimes the midshipmen felt like there was never enough time to do it all.





Midshipmen also gave the school buildings and classrooms a new coat of paint.

MID Lim En said: “We need to cherish our time and use it wisely, such as time on the bridge to practice our watch keeping skills. Although MSTD is tiring, we should try to make sure our time is fully utilized.”

Out of 103 midshipmen who participated in Ops SBJ, about half of them had done overseas community involvement projects before. But representing the Navy, and the nation, was a different experience for them.

MID Timothy Kok said: “It felt as though I was a little part of Singapore walking around and helping people. There was a responsibility to carry ourselves well, be polite, and smile – really smile, with our eyes.”

In a village that is not often visited by foreigners, it touched the hearts of the local population.

Impres 1 Tinombo schoolteacher Mr Faham said: “Through Ops SBJ, the children learn about social activities from other countries, and they know there are people who care about them.”



Midshipmen and ship crew from RSS Endeavour contributed to the logistics of Ops SBJ, transporting equipment from the ship to the village and helping to set up the medical and dental facilities.

SBJ in numbers

262 SAF personnel involved



21 surgeries performed

Dental screening performed on

363 students

129 patients treated through primary healthcare services



400 stationery packs distributed to students from two schools

1,000 boxes of daily essentials such as cooking oil and salt distributed

RITE OF PASSAGE

Photos by Jonathan Ryan

Before entering the obstacle course, pollywogs are doused in alternating bursts of cold, warm and icy water.

Crossing the equator is a rite of passage for all Navy men and women. Navy News editor Clara Lock joins the 74th batch of Midshipman as they make the journey from Pollywog to Shellback.

They haul us from our beds at five in the morning.

It concludes the series of ominous pipes that have been playing through the night – Pollywogs, we are coming for you! – is the common refrain amidst menacing cackles and throaty laughs.

I am on board landing ship tank RSS *Endeavour*. It is the second leg on a six-week Midshipman Sea Training Deployment. And as the ship transits from Sulawesi to Singapore, it will cross the equator.

So will we. Crossing the equator is a maritime tradition, a ritual that initiates new sailors, known as pollywogs, into the brethren. To do so we must complete a mini obstacle course that is meant to make us dirty, smelly and unpleasant.

When we are done we will be known as honourable shellbacks, sailing the seven seas.

It begins as soon as I enter the tank deck – a hundred midshipmen are huddled together.



Together with the midshipmen, the writer is made to leopard crawl through a maze that is laced with a sticky concoction of food and sauces.

Various characters – Davy Jones and his pirates surround us, shouting and taunting, while King Neptune, his queen and the Royal baby held court.

I am apprehensive, but many shellbacks agree that the ceremony used to be worse. Over the past few days the crew had been swapping stories of swill, rotten eggs and ox blood being used in the ceremonies they had gone through.



"You'd better finish the piece of bread on your plate," they tell me half-jokingly at dinner, "or it might come back to haunt you."

But they all agree that crossing the equator is all in good fun, a shared experience that batch mates will laugh about – and grimace at – for a long time.



These days, pollywogs are luckier. I am told during the brief that all the food used in tonight's ceremony will be fresh and edible – such as the dollop of baked beans that is poured onto the back of my neck while I am waiting for the obstacle course to start.

We make our way on all fours down to the well dock, where an obstacle course has been set up between two fast craft, and slither on our bellies through a dark, sticky concoction. I make out the smell of coffee grinds and yong tau foo sweet sauce, while shellbacks douse us with flour and oil from above.

A cacophony of voices reverberates around the enclosed well dock. Groups of midshipmen belt out the Navy song, while other groups count out sit-ups and push-ups they are being made to do. Shellbacks shout at us to crawl faster through the slippery mess.

I reach a sea boat, which has been filled with a cold, grey, murky soup. It smells like tangerines and pepper, with vegetables floating on the surface. "Put your head in!" command the shellbacks around me.

It looks disgusting, so I try to slither through without submerging my face. The shellbacks are not pleased.

"Go again! Go again!" they holler. This repetition is par for the course during an equator crossing. Some of the midshipmen are made to crawl through the course up to eight times.

I count myself lucky having to only do it twice more, before I make it to the last obstacle, King Neptune and Queen Amphitrite. Together with two other midshipmen we entreat the Royal Court to forgive our maritime misdemeanors, including polluting the seas and eating shark's fin soup.



Before entering the obstacle course, pollywogs are doused in alternating bursts of cold, warm and icy water.

Then King Neptune raises his staff and anoints us. After two years and eight deployments in the Navy, this pollywog is now a proud shellback.

And yes, I will laugh about it later.



SINGAPORE'S GOLDEN JUBILEE

Story by S Mitra

Photos by Navy News, ME2 Jasper Ong and courtesy of CPL Benjamin Ang

The Navy took part in Singapore's Golden Jubilee this year, celebrating 50 years of Singapore's nationhood.



2 The Specialised Marine Craft (SMC) was on display during this year's mobile column. This was the first time the SMC, which is used in maritime security for surveillance and interception of vessels in our waters, was unveiled to the public. Other assets displayed in the mobile column included the KSTER expendable mine disposal system, REMUS autonomous underwater vehicle and Protector unmanned surface vessel and ScanEagle unmanned aerial vehicle.



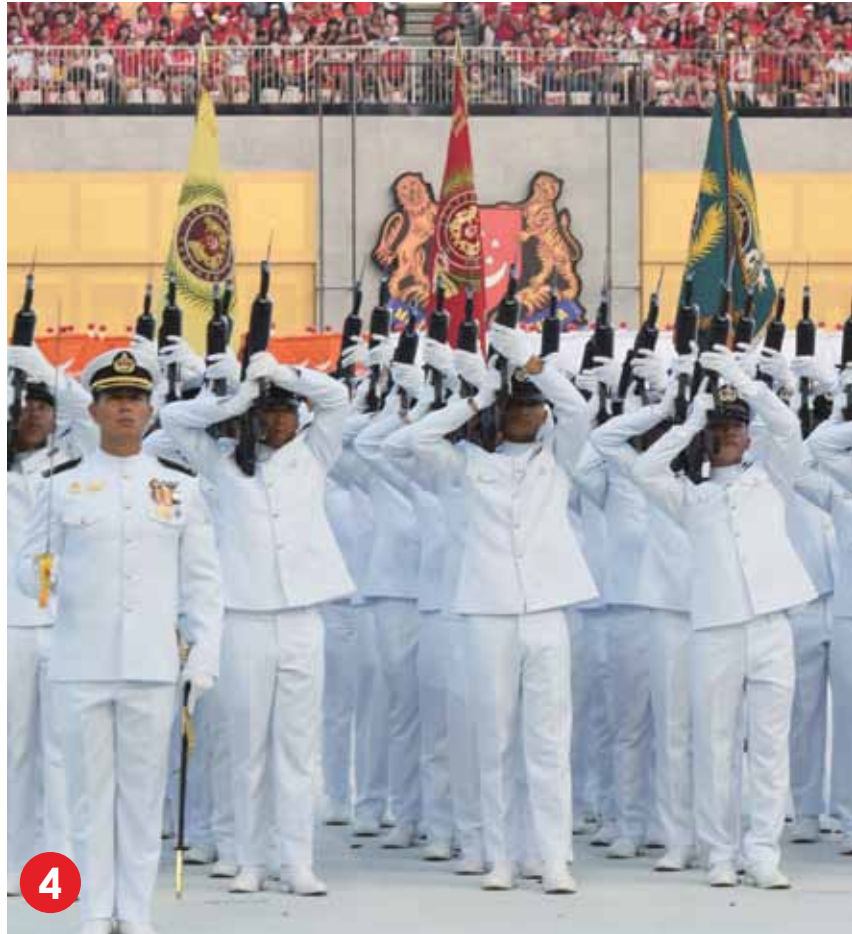
1 191 Squadron, which is home to the landing ships tank and Fast Craft Training Unit, celebrated their 39th anniversary on board RSS *Endeavour*, which anchored off Marina South Pier for a screening of the parade and a prime view of the fireworks. Navy families, pioneers and Operationally Ready National Servicemen from the squadron all came for the celebration, which took place on 1 August.

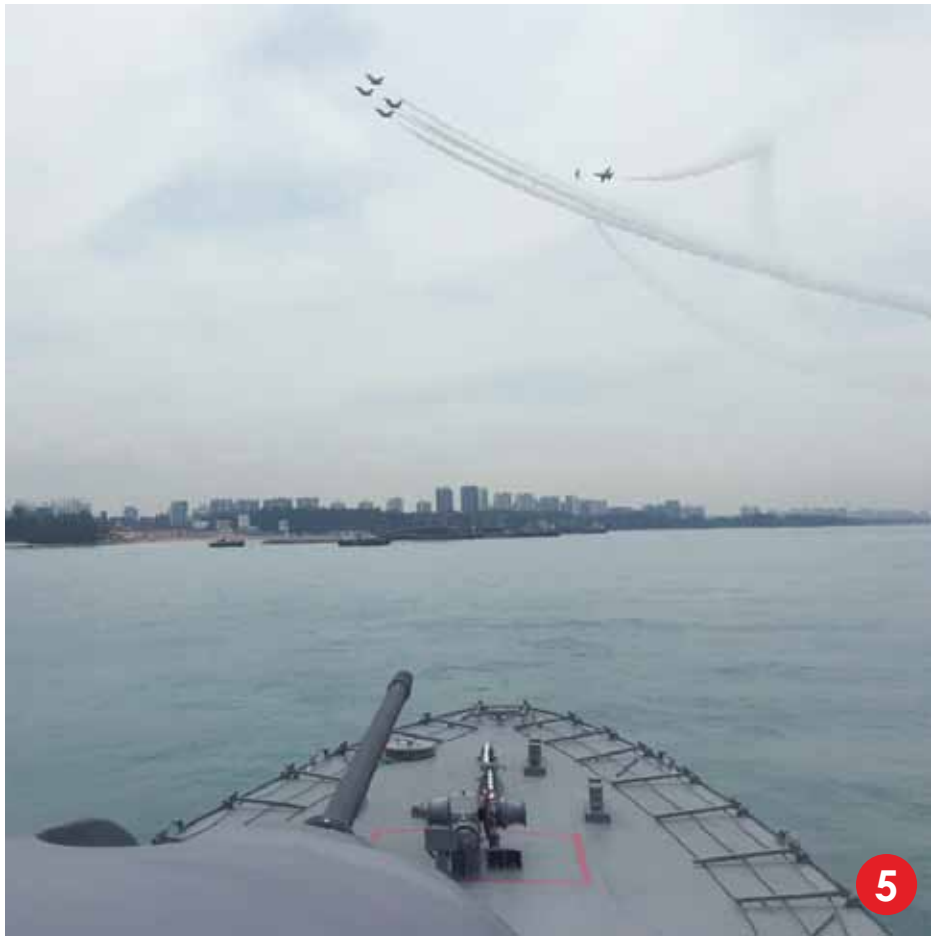
3 2LT Chia Zhe Ming from 194 Squadron was the RSN State Ensign Bearer, and led the Regimental Colours in this year's NDP. "At the beginning, we were not used to flag drills, but with teamwork and guidance from our instructors, we managed to accomplish what we had to, and enjoy this once-in-a-lifetime experience," he said.

4 CPL Mohamed Firdauz Bin Mohamed Ali (*third from the right*), standing proud together with his fellow naval divers from the 42nd Combat Diver Course. As part of the Navy Guard of Honour contingent, they performed the *feu de joie*, a synchronised firing of rifles to celebrate momentous occasions.

5 As Singaporeans turned out in full force to celebrate the Jubilee long weekend, RSN ships were deployed for operations off the waters of Marina Bay, keeping the country safe as the Republic of Singapore Air Force's Black Knights wowed the crowds with their aerial manoeuvres overhead.

6 Personnel from the Naval Military Experts Institute also took part in the parade, carrying their rifles in high port for the march past.





7 The vintage segment of the parade featured pioneers from the three services, recreating Singapore's first NDP back in 1966. Among them was retired Navy serviceman, 85-year-old 2WO (Ret) Booi Seow Kiat – the oldest participant in this year's parade. He said: "I was marching in the first NDP back in 1966 and here I am again, marching on our 50th year of independence. I am very happy to be able to come back with other pioneers, don this vintage uniform and march for the nation."

FOR FAMILY, FOR COUNTRY

Story and photos by Harry Sin and S Mitra

These men and women are part of the Navy Family both at work and at home. They share what it means to serve with their loved ones.

(L-R) Brothers ME3 Goh Han Qwee, ME3 Goh Han Keong and ME1 Goh Han Yong all served in the Maritime Security Task Force four years ago.





Brothers-in-arms

The Goh brothers gather on the first day of every Chinese New Year, where all five siblings and their parents come together for a meal.

But during Chinese New Year four years ago, the three brothers were recalled in quick succession – on the first, second and third day of the festivities.

All of them were serving in the Maritime Security Task Force at that time. Eldest brother ME3 Goh Han Qwee was sailing, while his two younger brothers ME3

Goh Han Keong and ME1 Goh Han Yong were on standby.

“It can be really difficult to plan family gatherings with the three of us working in the Navy, but times like this we just have to answer the call of duty,” said ME3 Goh Han Qwee, who joined the Navy 25 years ago.

It was his influence that led to ME3 Goh Han Keong, and later ME3 Goh Han Yong joining the Navy.

After his Basic Military Training, ME3 Goh Han Keong decided to sign on with the Navy. Having my

older brother in the same service will allow us to help each other when we face challenges as work, he said. ME3 Goh Han Keong is now a communications cluster chief on landing ship tank RSS *Persistence*, while ME3 Goh Han Qwee is currently the coxswain in the Fast Craft Training Unit.

Their youngest brother ME1 Goh Han Yong, 26, is currently a communication systems operator on patrol vessel RSS *Daring*.

“I feel proud to be able to serve and defend Singapore together with my brothers” said ME3 Goh Han Qwee.

From strength to strength

ME3 Sukdhev Singh turned 56 three days after National Day, and this year he celebrated in style.

ME3 Sukdhev and his son, CPT Kevindev Singh rode down City Hall on a Bionix II Infantry Fighting Vehicle, as part of the National Day Mobile Column – a display of Army, Navy and Air Force assets at this year's National Day Parade (NDP).

The duo was among representatives of multi-generational families who serve in the SAF.

ME3 Sukdhev, who is Chief Propulsion Systems in the Maritime Security Task Force, said: "I feel very honoured and proud to stand alongside with my son in this year's SG50 NDP. It is the first time I get

to do this and I'm very happy that it is with my son."

He recalls bringing his son to Navy Open Houses when CPT Kevindev was just a boy. "I'm really proud that he is currently serving in the Navy and following my footsteps," said the 56-year-old.

When CPT Kevindev considered signing on during his full-time National Service, the camaraderie and brotherhood he saw when he visited his father's ship during the Navy Open House and RSN Family Day played a big part.

"When I visited his ship and saw how people spoke to my father, I could see that he was respected," said the 26-year-old. He added that his father never spoke negatively about his job, and would

share stories about his work with the family.

CPT Kevindev, who is an assistant navigation officer on missile corvette RSS *Vigour*, said: "(Being in the Navy) is tough at times, and the demands of the job are not fixed, but by training together with my ship, we can strengthen our bonds and meet challenges we face."

His father is glad that the Navy has taught his son, and a new generation, maturity and leadership.

"Having defended Singapore for the past 30-odd years, it is my son's turn to defend it for the next 30," said ME3 Sukdhev.

ME3 Sukdhev Singh inspired his son, CPT Kevindev Singh, to join the Navy through tales of service and the sea.





LTC Wong Foo Chan and his wife, Defence Executive Officer Ms Li Xiang Ying, are the proud parents of two boys with another on the way.

Sharing the Load

Husband and wife LTC Wong Foo Chan and Ms Li Xiang Ying have started a family and nurtured a home, all while supporting each other through their careers in the Navy.

The pair, who have been married for five years, met while they were officers-in-attendance for the visit of the United States Navy's Seventh Fleet Commander. They are now expecting their third son, who is due next year.

LTC Wong, who is the Commanding Officer of the Naval Diving Unit's Clearance Diving Group, said: "Working in the RSN allows us to understand each other's work better."

Although the demands of the job are tough, LTC Wong makes time for the family.

"He is a very hands-on father and that is what I appreciate about him. He tries very hard to be around during this period when I am expecting our third child" said Ms Li, a Defence Executive Officer at the Naval Personnel Department.

With all the influence from the military – their two sons attend Cherie Hearts childcare at MINDEF Headquarters, and are comfortable with the men and women in uniform they encounter – both parents would not be surprised if their sons end up in the Navy, truly making them One Navy Family.

“ Working in the RSN allows us to understand each other's work better. ”

– LTC Wong Foo Chan



DIVE HARD, PLAY HARD

*Story and photos by Hans Lim
Additional photos by Harry Sin*

Combine two physical and fun sports by having a go at underwater rugby, played on and below the surface up to depths of five metres.

When RSN buddies CPT Caleb Tong and MAJ Lester Chng first took up underwater rugby, they found the physical challenge a rude shock.

CPT Tong described his first foray into underwater rugby as a “water-drinking session”, where he could hardly swim to the bottom of the five-metre pool where the game is played.

But they have since represented Asia as part of the First Asian Team Underwater Rugby (FATUWR) in the Pan Pacific Cup, which was held in Brisbane, Australia this April.

Underwater rugby is played by two opposing teams of six. Teams attempt to score a ball, which is filled with saltwater and does not float, into the opponents’ goal basket.



But unlike water polo, where the goal is a net above the water surface, underwater rugby player score into underwater baskets placed at opposing ends of the pool. The baskets, which are secured to the floor of the pool, are roughly the size of basketball nets.

Players must pass the ball to each other beneath the surface of the water, which requires them to hold their breath while swimming underwater.

This makes the game very physically challenging – which MAJ Chng said is all part of the appeal.

“The game is so demanding yet so exciting at the same time. It is three-dimensional, so while I can pass the ball left-right-down-up, I also expect threats from all directions when I have the ball possession. It takes a lot of strong will to stay under water to defend the goal basket when your opponents are trying to ‘drown’ you,” he said.

MAJ Chng likened the training process of the game to what RSN personnel go through.

“The way we trained together every weekend, both Saturdays and Sundays for the Pan Pacific Cup brought back memories of how I trained with my crew before our ship’s readiness inspection,” he said.

He added: “The trainings are hard but like what my predecessors from both the RSN and the underwater rugby team believe – train hard, fight easy.”

Join the team! If you’re keen to find out more or to give underwater rugby a try, go to www.fatwur.com or get in touch with MAJ Chng and CPT Tong at lesterchng@gmail.com and calebtong@live.com. The duo hopes to start an RSN team of underwater rugby players.

“ The trainings are hard but like what my predecessors from both the RSN and the underwater rugby team believe – train hard, fight easy. ”

– MAJ Lester Chng

A WALK IN THE PARK

Story and photos by Jonathan Ryan

Take a trip out of the concrete jungle and explore some flora and fauna with the walking trails Singapore has to offer along serene waterways.

Sungei Buloh Wetland Nature Reserve

Singapore's first ASEAN Heritage Park is filled with rich biodiversity, in the extensive mangrove forest of Sungei Buloh Wetland Reserve. First opened as a Nature Park in 1993, the 130 hectares were officially gazetted as a Nature Reserve and renamed Sungei Buloh Wetland Reserve in 2002.

It houses 27 out of the 70 species of mangrove trees in the world, such as the *Tengar Merah* and the Mangrove Apple. At moderate tide, the trees along the banks are crowded with kingfishers hunting in the river. If you're lucky, you may catch a glimpse of smooth otters hunting for fish.

Along the mangrove swamps, discover native inhabitants such as mudskippers, crabs, water snakes, monitor lizards and otters. The trail leads to the 18m tall Aerie Hide tower that offers panoramic views of the reserve, the surrounding areas of Singapore and even Johor Bahru.



Renamed in 2002, Sungei Buloh Wetland Reserve offers trails through mangrove swamps and forest terrains.



Trek through mangrove swamps and observe native inhabitants such as mudskippers, crabs, shellfish, water snakes, birds, spiders, monitor lizards and otters.



The Sunset Walk allows you to enjoy a splendid view of the sunset at the western end of Changi Point; the perfect spot for a romantic stroll.

Changi Point Coastal Walk

The Changi Point Coastal Walk hugs the coast and offers beautiful views of the sea. The boardwalk comprises six sections – Creek Walk, Beach Walk, Sailing Point Walk, Cliff Walk, Kelong Walk and Sunset Walk.

The trail begins at Creek Walk, a 280m stretch where you can view bumboats ferrying passengers to and from offshore islands. It continues to the Beach Walk and Sailing Point Walk which houses a variety of flowers such as the Sea Almond and Maiden's Jealousy. Keen-eyed birdwatchers might spot the Black-Naped Tern, which was featured on Singapore's one-dollar note that was issued between 1976 and 1984.

Cliff Walk offers glimpses of the tropical rainforest, and is covered with tall Tembusu trees and the *Simpoh Air*. Next, the Kelong Walk extends into the sea. It is built above water on stilts, and a favourite among fishing enthusiasts. Changi Point Coastal Walk concludes with the Sunset Walk, which is the best spot to relax and enjoy the sunset after the stroll.



Observe flora and fauna of Changi Point Coastal Walk through the 2.2km trails. Attentive visitors would be able to spot the Pacific Swallow or the Sea Hibiscus.

Labrador Nature Reserve

Labrador Nature Reserve comprises three distinct segments – Alexandra Garden Trail, Berlayer Creek Mangrove Trail, and Bukit Chermin Boardwalk. These tranquil nature spots contain 40% of the endangered and vulnerable plant species in Singapore.

Walk or jog along the 830m-long Alexandra Garden Trail, which is lined by plants such as the Flaming Beauty and Flowering Banana. These plants, which are scented to attract butterflies, create a buffer against the noise and heat of traffic along Alexandra Road.

The Berlayer Creek Mangrove Trail is surrounded with mangroves, which have become increasingly rare in Singapore. One of two remaining mangroves in the south of mainland Singapore, Berlayer Creek is home to a myriad of fauna and flora - some 60 recorded bird species, 19 species of fishes and 14 true mangrove plant species make the mangrove area their home.

Bukit Chermin Boardwalk offers views of the expansive waters of Keppel Harbour, the lush greenery of Bukit Chermin hill, and the distant rocky cliffs of Sentosa Island. The conserved heritage of the four existing black-and-white bungalows on Bukit Chermin are a must see.

FIRST OF THE CLASS - SMARTER. FASTER. SHARPER.

Story by S Mitra

The first of a new class of ship was launched by Mrs Ivy Ng, wife of Defence Minister Dr Ng Eng Hen, at the Singapore Technologies Marine's Benoi shipyard on 3 July. *Independence*, as it is known, is the first of eight littoral mission vessels (LMVs), all to be fully operational by 2020 to replace the existing Fearless-class patrol vessels (PVs).

The new LMVs are highly capable warships designed and equipped with advanced combat

capabilities and technologies to further strengthen the RSN's ability in the seaward defence of Singapore and protecting our sea lines of communication.

The smarter, faster and sharper LMVs also introduced numerous new features to the RSN. In Dr Ng's words, "The LMV is not just another new ship but instead will lead the way in how we use technology to overcome operational demands."



Smarter Integrated Command Centre

In a break from the traditional warship design, the LMVs' bridge, combat information centre and machinery control room are co-located. The introduction of the new operating concept enhances the integration and synergies the management of navigation, engineering and combat functions. This provides greater operational effectiveness and efficiency, particularly in maritime security operations.

Engineering as Design

The support was "designed" into the LMVs to improve operational readiness such that less time will be required for the maintenance of the ships. An example is the stacked mast, where 90% of the parts that require regular maintenance are easily accessible from within the mast, rather than outside as in most ships' design.

Integrated Management Systems

Numerous sense-making and decision support systems, complemented by a high level of automation in the ship, are incorporated into the LMV's combat and platform suite. From the combat

management system to the integrated platform management system, these will enhance situational awareness and accelerate decision making. They allow the LMV to be more leanly manned compared to its predecessors, while not losing out in effectiveness.

Sharper Capabilities

The LMVs are versatile and can be quickly configured with mission modules to take on a wide spectrum of operations. They range from maritime security operations, search-and-rescue operations to surveillance and mine countermeasure operations. Depending on operational requirements, the LMVs can be configured to embark rigid hull inflatable boats, boarding teams or a helicopter, or equipped with medical modules or unmanned systems.

Superior Surveillance Capabilities

A 360° bridge, a three-dimensional surveillance radar system and two high resolution navigation radars allows the LMVs to detect surface targets better in the congested environment. This is essential in our congested waters where there is a high concentration of shipping and fishing activities amidst island groups.

Ship Specifications

Length	80 metres
Beam	12 metres
Draught	3 metres
Displacement	1,250 tonnes
Speed	in excess of 27 knots
Endurance	3,500 nautical miles (up to 14 days)
Baseline Complement	23 crew
Sensors	<ul style="list-style-type: none"> • Thales NS100 3D Surveillance Radar • Kelvin Hughes Sharpeye Navigation Radar • STELOP 360° All-Round Surveillance System • STELOP Compass D Electro-Optic Director
Weapons	<ul style="list-style-type: none"> • MBDA MICA Anti-Air / Anti-Missile Missile System • OTO Melara 76mm Gun • Rafael 25mm Typhoon Gun • OTO Melara 12.7mm Hitrole Gun • Remote Control Long Range Acoustic Device and Xenon Light • Water Cannon System

PIONEERING SPIRIT

Story by S Mitra and Jonathan Ryan

Photos by Jonathan Ryan

The RSN launched our first Littoral Mission Vessel (LMV) *Independence* on 3 July. The LMV's will replace the existing Fearless-class patrol vessels. Former pioneer commanding officers (COs) of the previous RSS *Independence* look back on their journeys in maritime security, while CO of the current LMV shares his hopes for the future.

“ It is a long way from where I was (in command of the very first RSS *Independence*) to come and see this vessel, and it is really impressive. With the capabilities that this ship can do, the Navy has really reached a stage where we can be considered one of the best. ”

- MAJ (Ret) Alan Aw, the first CO of the patrol craft RSS *Independence* in 1970

“ The name *Independence* is very significant, because independence for Singapore came at a price, and the defence of Singapore lies in our hands. My hope for the Navy and the pioneer crew (of the LMV) is that they remain sharp and committed, and continue to pass on the values of the Navy from one generation to another. ”

- LTC (Ret) Lim Hock Chye, the first CO of the patrol vessel RSS *Independence* in 1998

“ Our pioneers had very little resources during our founding years, and they made up for it with their unwavering spirit and determination. Today, while we have access to better technology and knowledge, our mission remains unchanged. And we are determined to follow the pioneering spirit in defending our nation. ”

- LTC Tay Choong Hern, who will command the LMV *Independence*

(L-R) LTC (Ret) Lim Hock Chye, MAJ (Ret) Alan Aw and LTC Tay Choong Hern are past and present commanders of RSS *Independence*.





PRIDE IN INNOVATION

Story by Harry Sin

At the Naval Logistics Command (NALCOM), the men and women are always focused on doing things better, to do better things.

The strength of the formation lies in their culture of innovation and drive for productivity. These efforts have paid off, with NALCOM taking home the Minister for Defence Award (Overall) for the second consecutive year at the MINDEF Productivity and Innovation in Daily Efforts (PRIDE) Day 2015.

Themed “Smart Nation, Smart Defence”, this year’s event, which was held at Singapore University for Technology and Design on 2 September, showcased the SAF’s strength in leveraging on smart technologies. One of the ideas is the development of a “Smart Base”, where technologies such as the automation of transport with driverless buses and an all-in-one card as a security pass, computer card and meal-tracking device could be introduced into our naval bases. This is aligned with the smart nation vision which is centred on benefitting and enabling the lives of Singaporeans.

