

Apr 2020 Issue 32

Link

NSL

2019
Review



Dear Colleagues

Year 2019 continued to be challenging year for NSL Group's businesses with heightened business uncertainties globally.

NSL Group achieved a turnover of \$272.4 million in FY2019, a 4% decrease from \$283.3 million in FY2018 due mainly to lower revenue both the Precast & Prefabricated Bathroom Unit (PBU) and Environmental Services divisions.

The Group incurred a significant loss before tax of \$35.0 million in FY2019 compared to loss before tax of \$3.1 million in FY2018. This was largely due to an impairment charge of \$17.2 million for slop processing assets due to increasingly difficult market conditions in reduced sales of recycled fuel oil (RFO) business, higher regulatory cost of compliance and the loss of a major customer and an impairment charge of \$7.3 million for the plant assets of recast operations in Malaysia as a result of weak project margin.

Looking ahead

As reported by Chairman in the letter to shareholders in our Annual Report 2019, the business condition for the Precast business in Singapore and Malaysia is expected to remain subdued. Whilst order book is strong in the first half, there are challenges to keep plant utilisation high in the second half amidst the weak construction sector outlook. Construction demand in Dubai is expected to soften post Expo 2020, and cost-cutting plan is in place to rightsize the operations. The overall performance of the division's PBU business in Finland is expected to remain satisfactory.

In the Environmental Services division, the RFO business which is currently being reviewed, continues to face challenging market conditions amidst changing market dynamics and low RFO prices. The business has been restructured to lower its operating costs and improve asset utilisation. Plant utilisation of the division's new organic wastewater treatment facility in Tuas is expected to increase gradually with more new customers being secured.

The COVID-19 outbreak is causing disruption to our operations but the extent of the adverse financial impact to the Group is still uncertain at this point of the outbreak.

Thank you all for the contributions to the Group the past year. In view of the unsatisfactory performance last year, Group CEOs from each SBU had taken full responsibility by accepting a pay cut in 2020 and no performance bonus in 2019. All employees in Singapore, Malaysia and Dubai had pay freeze in 2020 and no performance bonus for 2019.

2020 is a difficult year for all of us and the COVID-19 has worsened it. However, I urge you to stand strong and resilient amidst the challenging time. Let us work harder this year, making greater effort to reduce costs through better productivity and efficiency and be more aggressive in developing our markets. Let us work together to achieve a turnaround in Profit this year!

Dr Low Chin Nam

A Note from Executive Director



Previous
Issue

**Jan 2020
Issue 31**

Advisor

Dr Low Chin Nam

Managing Editor

Yvette Tan

Editorial

Jermaine Oh

Committee

Precast & PBU:

Debbie Tan,
Lim Siew Howe, Matti Mikkola,
Lee Mun Sam, Henrik Jensen,
Jussi Raunio

Environmental Services:

Jeffrey Fung

RML:

Ray Parry

SRC:

Jessica Toh

Safety:

Chia Wei Min

About NSLink

(For internal circulation only, not for publication) NSLink is an electronic newsletter published quarterly by NSL Corporate Communications. All contents herein are copyrighted and belong solely to NSL Ltd. To use articles published in NSLink, kindly contact us for permission.

Contact

nslink@nsl.com.sg

Facebook

NSLGroup





NSL Group FY2019 Results



Registered a loss
before tax of
\$35 million and
turnover of

\$272.4
million



Proposed
dividend of

\$0.05

per share for
the financial
year

Group Overview

Group Turnover
Group (Loss) / Profit Before Tax
Group (Loss) / Profit attributable to equity holders of the Company

THE GROUP

FY2019 S\$'000	FY2018 S\$'000	Change %
272,350	283,299	(4)
(34,952)	(3,079)	n/m
(33,637)	(4,300)	n/m

Continuing Operations

Turnover (S\$' mil)

Precast & PBU
Environmental Services
Others

THE GROUP

FY2019	FY2018	Change %
218.6	225.0	(3)
33.1	36.2	(9)
20.7	22.1	(6)
272.4	283.3	(4)

Attributable profit / (loss) before tax (S\$'mil)

Precast & PBU
Environmental Services
Share of SMAG / PSLT results
Others

FY2019	FY2018	Change %
(9.7)	(3.8)	n/m
(23.5)	(0.7)	n/m
(0.8)	(0.4)	n/m
(1.0)	1.8	n/m
(35.0)	(3.1)	n/m

n/m: not meaningful

Year 2019 continued to be another challenging year for NSL Group's businesses with heightened business uncertainties globally.

NSL Group achieved a turnover of \$272.4 million in FY2019, a 4% decrease from \$283.3 million in FY2018 due mainly to lower revenue from both the Precast & Prefabricated Bathroom Unit (PBU) division and the Environmental Services division.

The Group incurred a significant loss before tax of \$35.0 million in FY2019 compared to loss before tax of \$3.1 million in FY2018. This was largely due to loss of \$23.5 million incurred by the Environmental Services division as a result of

impairment charge of \$17.2 million for its slop processing assets due to increasingly difficult market conditions in its reduced sales of recycled fuel oil (RFO) business, higher regulatory cost of compliance and the loss of a major customer. Increased operating losses was also reported by the division from reduced sales of RFO and comprehensive plant maintenance, and further impacted by higher legal fees.

Its Precast & PBU division also incurred higher loss of \$9.7 million mainly due to impairment charge of \$7.3 million for the plant assets of its Precast operations in Malaysia as a result of weak project margin.

After taking into account income tax and non-controlling interests, the Group reported a loss attributable to shareholders of \$33.7 million in FY2019, compared to a loss of \$4.3 million in FY2018.

Significant Events

On 25 July 2019, NSL OilChem Waste Management Pte Ltd, the Environmental Services division of NSL Ltd, officially opened its \$40 million new industrial wastewater treatment complex at 7 Tuas Avenue 10. This new facility, an expansion of the Company's wastewater capability to support Singapore's high-value chemical industry sector, is designed to treat a wide spectrum of industrial wastewater from industries like



petrochemicals, pharmaceutical, and automotive. The official opening was graced by Guest-of-Honour, Dr Beh Swan Gin, Chairman of the Economic Development Board, and attended by many customers, industry partners and associates.

To streamline its Environmental Services division, NSL OilChem Waste Management Pte Ltd divested its 82.75% stake in NSL Fuel Management Services Pte Ltd, a non-core business involved in distributing oil products in August 2019.

During the year, the Group's Precast Malaysia and Singapore operations clinched several iconic projects such as JTC's nine-storey industrial development, ASM Front-End Manufacturing Singapore, NTUC FairPrice fresh food distribution centre, 11-storey social media data centre, Hospital Putrajaya, Penang International Airport carpark and schools.

Dubai Precast was awarded key projects, including Saudi German Hospital and Moroccan Pavilion at Expo 2020. Together with the Aqua Green team from Ajman Academy, Dubai Precast won first place in the Global Solar Decathlon competition for developing a new type of insulated sandwich walls to enable passive cooling system.

The PBU business, a dominant producer in Scandinavia, was awarded key projects such as Aveny Vest housing project in Norway and Sockerbruket apartment block in Sweden.

NSL Group continued to use technology as an enabler to enhance productivity and competitiveness. During the year, the Group's Corporate Research and Development and IT departments worked closely with various subsidiaries to harness digitalisation opportunities, automating processes and streamlining workflows. The team successfully automated business processes and stepped up laboratory capabilities in the Group's new industrial wastewater plant in Tuas, improving its productivity and efficiency. At the Tanjong Kling plant, the wastewater treatment processes were enhanced to strengthen its capability in meeting stringent regulatory discharge standards.

Concurrently, the Group's Precast operations implemented vehicle tracking for deliveries from Johor, Malaysia, to Singapore, achieving a greater level of customer satisfaction.

Looking Ahead

The business condition for the Precast business in Singapore and Malaysia is expected to remain

subdued. Whilst order book is strong in the first half, there are challenges to keep plant utilisation high in the second half amidst the weak construction sector outlook. Construction demand in Dubai is expected to soften post Expo 2020, and a cost-cutting plan is in place to rightsize the operations. The overall performance of the division's PBU business in Finland is expected to remain satisfactory.

In the Environmental Services division, the RFO business which is currently being reviewed, continues to face challenging market conditions amidst changing market dynamics and low RFO prices. The business has been restructured to lower its operating costs and improve asset utilisation. Plant utilisation of the division's new organic wastewater treatment facility in Tuas is expected to increase gradually with more new customers being secured.

The COVID-19 outbreak has caused disruption to our operations but the extent of any adverse financial impact to the Group is uncertain at this point.

Dividend

Subject to the approval of shareholders at the annual general meeting of the Company to be held on 23 April 2020, the Board is recommending a final dividend of \$0.05 per share for the financial year ended 31 December 2019 to be paid on or about 20 May 2020 or such other date to be determined by the Directors.



Scan to read
2019 Annual
Report



<http://www.nsl.com.sg/investor-relations/annual-reports>

Review of Precast & PBU 2019

Performance

The Precast & PBU division's turnover declined 3% from \$225 million in FY2018 to \$218.6 million in FY2019, mainly as a result of lower delivery volumes by operations in Dubai and Finland.

The division registered a loss before tax of \$9.7 million in FY2019 compared to \$3.8 million in FY2018. The higher loss before tax was primarily due to a one-off impairment charge of \$7.3 million for the plant assets of its Precast operations in Malaysia as a result of weak project margin. Excluding the impairment charge, the Singapore and Malaysia operations reported lower operating loss, driven by improved sales. However, its operations in Finland and Dubai registered lower operating performances because of lower revenue.

Development Highlights

During the year, the Precast business in Singapore and Malaysia clinched several iconic projects such as JTC's nine-storey industrial development, ASM Front-End Manufacturing Singapore, NTUC FairPrice fresh food distribution centre, 11-storey data centre, Hospital Putrajaya, Penang International Airport carpark and schools.

The significant projects that its Dubai operations successfully completed were the supply and installation of 78 units of two-storey villas in Umm Suqeim and coloured cladding façade panels with white sandblasted and brown wood textured surface for a 13-storey apartment at Al Jadaf.

The PBU business, a dominant producer in Scandinavia, was awarded key projects including Disney cruise ships, Aveny Vest housing project in Norway and Sockerbruket apartment block in Sweden.

Going forward

The business condition for the Precast business in Singapore and Malaysia is expected to remain subdued. Whilst order book is strong in the first half of 2020, there are challenges to keep plant utilisation high in the second half amidst the weak construction sector outlook.

Construction demand in Dubai is expected to soften post Expo 2020, and a cost-cutting plan is in place to rightsize the operations. The overall performance of the division's PBU business in Finland is expected to remain satisfactory.



Review of Environmental Services 2019

Performance

Turnover of Environmental Services division slid 9% to \$33.1 million in FY2019 due mainly to lower sales from the (RFO) business as a result of weak market demand and comprehensive plant maintenance.

The division registered a loss before tax of \$23.5 million in FY2019 as compared to a loss before tax of \$0.7 million in FY2018. The significantly higher loss was largely due to a one-off \$17.2 million impairment charge for its slop processing assets. Excluding the impairment charge, the division reported operating loss of \$6.3 million mainly as a result of reduced RFO sales, comprehensive plant maintenance and significantly higher legal fees.

Development Highlights

The Environmental Services division officially opened its new industrial wastewater treatment complex at Tuas in July 2019 and received full operation licence from National Environment Agency in 4Q2019. During the year, the division established a Treatability laboratory in the complex, which works closely with operations to find cost effective treatment solutions for new difficult-to-treat wastewater types.

To enhance process efficiency and strengthen Environment, Safety and Health compliance, the division undertook a comprehensive plant maintenance of its slop processing plant during the year.

To ensure the division is always ready in an emergency, the Company Emergency Response Team (CERT) trains and refreshes its skills in mandatory safety trainings regularly. In recognition of its safety efforts, the CERT team received a pass with commendation from Singapore Civil Defence Force during the audit in 4Q2019.

During the year, the division enhanced its operational efficiency through the implementation of the Maintenance Management System, an online platform to keep a digital record of all maintenance activities and track status of each maintenance job request.

Going forward

In the Environmental Services division, the RFO business which is currently being reviewed, continues to face challenging market conditions amidst changing market dynamics and low RFO prices. The business has been restructured to lower its operating costs and improve asset utilisation. Plant utilisation of the division's new organic wastewater treatment facility in Tuas is expected to increase gradually with more new customers being secured.



Facts You Never Knew About RM Hotel

We have 3 staff for reception desk and 2 housekeeping, they work on 2 shifts.

Our rooms rates are at \$200++ (standard room) and \$230++ (Deluxe room) for non-members. If you book your wedding package with us, it comes with free room stay for a night.

There are 19 rooms, 10 standard rooms and 9 deluxe rooms.

It takes about 15 mins to half an hour to clean up a room.

Our guests are mainly from Malaysia, China, Indonesia and Europe.

Our guests are largely corporate profile that works in Tuas area.

The longest stayer we ever had was **ONE YEAR**. He was from Malaysia and stayed during weekdays and check out on weekends.

Common things that guests left behind are Laptop cable, adaptor, shoe, shirt and etc. The most valuable item that our guests have ever left behind was Translator device.





Eastern Pretech Group Updates

Singapore

By Wilson Chong

EPS awarded contract for medical block at Mount Alvernia Hospital

Eastern Pretech Singapore (EPS) was awarded the contract to fabricate and deliver precast hollow-core slab for the proposed erection of a ten-storey medical block at Mount Alvernia Hospital, Singapore. Total area is 14,390m² of hollow-core slab. The delivery is estimated to commence from May 2020 to Dec 2020.

Finland

By Jussi Raunio

Parmarine supplies bathroom units for Helsinki Student Housing Foundation HOAS

Parmarine was awarded the contract to supply 165 bathroom units for Helsinki Student Housing Foundation HOAS, a 13-storey wooden apartment building in Tapiola, Espoo. Deliveries will take place in 2020. The house is made of prefabricated modules with all interior work done, including a finished bathroom unit.

Dubai

By Henrik B. Jensen

Dubai clinches contract for Austrian Pavilion at EXPO2020

Dubai Precast was awarded the order to design, supply, delivery and erection of 38 precast concrete cones for the Austrian Pavilion for EXPO2020, which illustrates the mountains in Austria. Austria unveiled the unusual concept for its pavilion being built on the EXPO2020 Dubai site – 38 interlocking cones blending on a 2,400m² plot to form a harmonious structure. The cones are between 6 and 15m high, cut off at the top and plastered with clay. Using the world's oldest building material and an intelligent ventilation concept with wind towers, the Austrian pavilion will naturally provide a comfortable atmosphere. Production has commenced and project is to be completed in 2Q2020.





NOWM Wins UD Extra Mile Challenge

NSL OilChem Waste Management (NOWM) was crowned the Singapore Champion in the annual UD Extra Mile Challenge 19/20! NOWM sent six drivers into the qualifying round in October 2019 and two drivers, Mr Tay Kay Poo and Mr Kunalan A/L Karpaya, entered the finals on 9 November 2019. Mr Tay Kay Poo, a driver from NOWM emerged as winner after many challenging obstacles and walked away with a \$500 shopping voucher, trophy, truck model and a subsidized trip to Japan's Global Competition. Through this competition, it heightened the team's awareness towards safe driving. There was reduced accident rate, repair and maintenance cost and fuel cost which is a valuable experience in itself.

The UD Extra Mile Challenge is UD Trucks' global driver competition. It aims to promote "smart drivers" where truck drivers are not just individuals behind the wheel but smart professionals managing the works of a truck. To rise up to the challenge, NOWM installed a gyroscopic sensing device in every vehicle to detect the driver's driving behavior. Five driving parameters, namely speeding, harsh acceleration, harsh braking, harsh cornering and excessive idling were closely monitored. There was a marked improvement in safety score from range of 14.6 to 41.08 in September 2018 to a range of 1.27 to 5.95 in January 2020.

On top of this, NOWM has implemented a stringent maintenance regime in place to further improve the mindset and behaviour of drivers. This includes a daily pre-trip vehicle checklist, monthly vehicle joint inspection conducted by ESH, Project Supervisor and Garage departments, monthly washing schedule to maintain cleanliness of vehicle and regularly attending refresher trainings conducted by in-house trainers.

After emerging as the top winner in the local market qualification round, Mr Tay will be competing in the Global Finals in Ageo, Japan with finalists from all over the world to find out who is the ultimate driver. Congratulations to the team on the win!



Mr Tay Kay Poo (third from left) with the winning team!



Gengxin receiving the award for best first parade task



Relaunch of CIQP

By Ng Ai Li

Raffles Marina (RM) re-launched its Custom Immigration Quarantine Procedures (CIQP) in the last quarter of 2019. What this means is that the marina is now open to receive and clear visiting yachts and facilitate in-marina clearances for all Singapore registered private yachts.

RM is located at the closest entry point to the Strait of Malacca and for boats wishing to continue their voyage on towards Phuket and Langkawi, it is the most convenient CIQP facility and will translate to substantial time-savings. With the Tuas Link MRT station adjacent to RM, access downtown or connecting anywhere in Singapore is now made even easier.

Ong Shean Boon, Marina Manager conducting the briefing

The final step of CIQP clearance taking place onboard RM's very own, Lady Olivia

Attendees of the CIQP Boater's Night



On 4 October, the club organised a Boater's Night to share about CIQP and the event was well attended by members and guests.



Among some of the safety enhancements that were put in place to prepare for the re-launch were additional CCTV cameras around the club, new glass fencing along the waterfront which fittingly gave the club an upgraded look altogether. The club also had to beef up its security team with one additional armed guard personnel.

Mr Ray Parry, CEO of RM said, "First and foremost, the CIQP facility is to benefit our members with their international arrivals and departures. Members can now arrive at or leave the marina without having to commute to the Western Quarantine & Immigration Anchorage off Sisters' Island, for their immigration clearance.

Secondly, we hope to provide visiting yachts an opportunity to enjoy RM's hospitality, as meeting the needs of the boating community has long been the club's mandate."

RM hopes this facility will increase the participation of visiting yachts at the largest keelboat regatta in Singapore, the SMU-RM Western Circuit Sailing Regatta held annually in August at the marina.

To find out more on CIQP, head to RM's website:



<https://bit.ly/36aO2da>



Happy New Year from RM!



On 7 January, staff of RM came together for the annual Lou Hei to usher in the Lunar New Year. The luncheon was graced by Mr Peter Lim, President of Raffles Marina and Mr Francis Lee, Honorary Advisor of Raffles Marina.

A sumptuous lunch was served followed by an awards ceremony where outstanding employees were recognised for their contributions over the year. The highly anticipated lucky draw segment ended the new year celebrations.

NOWM Celebrates CNY

On the fourth day of the Lunar New Year, NOWM employees from various departments gathered together for a 开工 lunch, which signifies the start of a new business year. It is also in celebration of the year of the Rat with prosperity, fortune, and good health!

"Lou Hei" which in Cantonese literally translates to "tossing up good fortune", is a must before the start of our sumptuous lunch. It is by popular belief that the higher the toss, the better the prospects and fortune in the year ahead. This lunch was definitely a good start to a prosperous year ahead!

Starting the year
with a feast!





Year End Celebrations at DPC

On 31 Dec 2019, Dubai Precast (DPC) organised a year end luncheon party for all staff. It was also a chance for everyone to come together to celebrate the year's achievements and management to show appreciation for their hardwork and effort.

DPC's tradition of gift exchange kickstarted the party. One the highlights of the party was acknowledging staff who have had 10 years of service in the company. A total of 20 staff were awarded certificates and an honorarium as a sign of the company's acknowledgement for the service and loyalty.

What a great way to welcome the new year!



Long service award presentation



Food Picks Nearby

For the next few issues of NSLink, NSLink Editorial Committee will feature foodies from each SBU and with their recommendations on where to go for a yummy lunch or just a short teabreak near their office or factory.

Read on to find out where you can find delicious dishes at Dubai Precast (DPC) and NSL OilChem Waste Management (NOWM).



Delyne Joy Tadle,
DPC, HR & Admin



1. Chicken Mandi

Price: AED 26.25 (S\$10)

Location: Bait Al Mandi in Al Barsha

I like this dish because aside from its big serving, it is a flavourful dish that is popular in the UAE to all different nationalities residing here. The chicken is juicy with less oil as it is cooked through steaming. This is the kind of food in which you cannot stop eating basmati rice alongside with it. We usually share it during special occasions in the office.



2. Hot Chick Wrap

Price: AED 35 (S\$13)

Location: Pret to Go in JAFZA



3. Chicken Charcoal

Price: AED 44 (S\$16)

Location: Royal Grill in DIP



Jewel Lim,
NOWM, Operations
Assistant Executive



1. Sichuan Spicy Dumpling Noodles

Price: S\$5

Location: Pioneer Mall

The Sichuan spicy dumplings are one of my favourites, as the spices and flavours from the sauces increase the texture of the wanton. It is especially nice for chilli lovers. Give it a try! We usually visit this place together as a team, where we would bond together.



2. Slice Fish soup with pumpkin rice

Price: S\$5

Location: Block 964 Jurong West St 91



3. Curry Yong Tau Foo

Price: S\$5

Location: Gek Poh Shopping Mall



Angie Chua,
NOWM, Ops Planner



1. Fish Soup

Price: S\$5

Location: 964 Jurong West Street 91

The secret of the sweet broth comes from the fried and sliced fish that is well marinated. To enhance the flavour, you can match it with nicely soaked bee hoon which helps to increase its taste. For fish egg lovers, you can also add it as a topping to this dish.



2. Ma La Xiang Guo

Price: S\$8

Location: Boon Lay MRT



3. Ban Mian

Price: S\$3

Location: 20 Pioneer Crescent



NSL SRC Events

Ice Skating & SRC AGM

On 20 December, 34 participants came together for an evening of fun at JCube's The Rink. To kick off the ice skating event, NSL SRC first had their Annual General Meeting, where the new incoming committee was introduced. Everyone then proceeded to the ice skating rink for a good time spent with colleagues outside of work.

We thank these volunteers for their hard work towards NSL SRC and look forward to more exciting activities!



Introducing the new NSL SRC committee

NSL SRC Committee for Year 2020/2021

Role	Name	SBU
Chairman	Jessica Toh Pei Wen	NSC
Vice-Chairman	Pan Jinglan	NSL
Secretary	Wilson Edit Soegama	NOWM
Treasurer	Ann Woon Shio Yeen	NOWM
Member	Guganathan Rathinam	NSC
Member	Arrich Cheong Ann Ming	NSC
Member	Shawn Ong Heng Yong	NOWM
Member	Chee Kai Li	NOWM
Member	Tan Wan Xin	NOWM
Member	Carine Loh Rui Lan	RM
Member	George Lim Meng Hwee	RM
Member	Cindy Ng Leng Hwee	RM



Fun on the ice skating rink



SSO's The Music of Star Wars Concert

On 20 December, 16 staff and their close ones were treated to a night of classical music at Singapore Symphony Orchestra's The Music of Star Wars concert held at the Esplanade. Familiar tunes from the movie, as well as popular moments from the film, brought good memories for all.

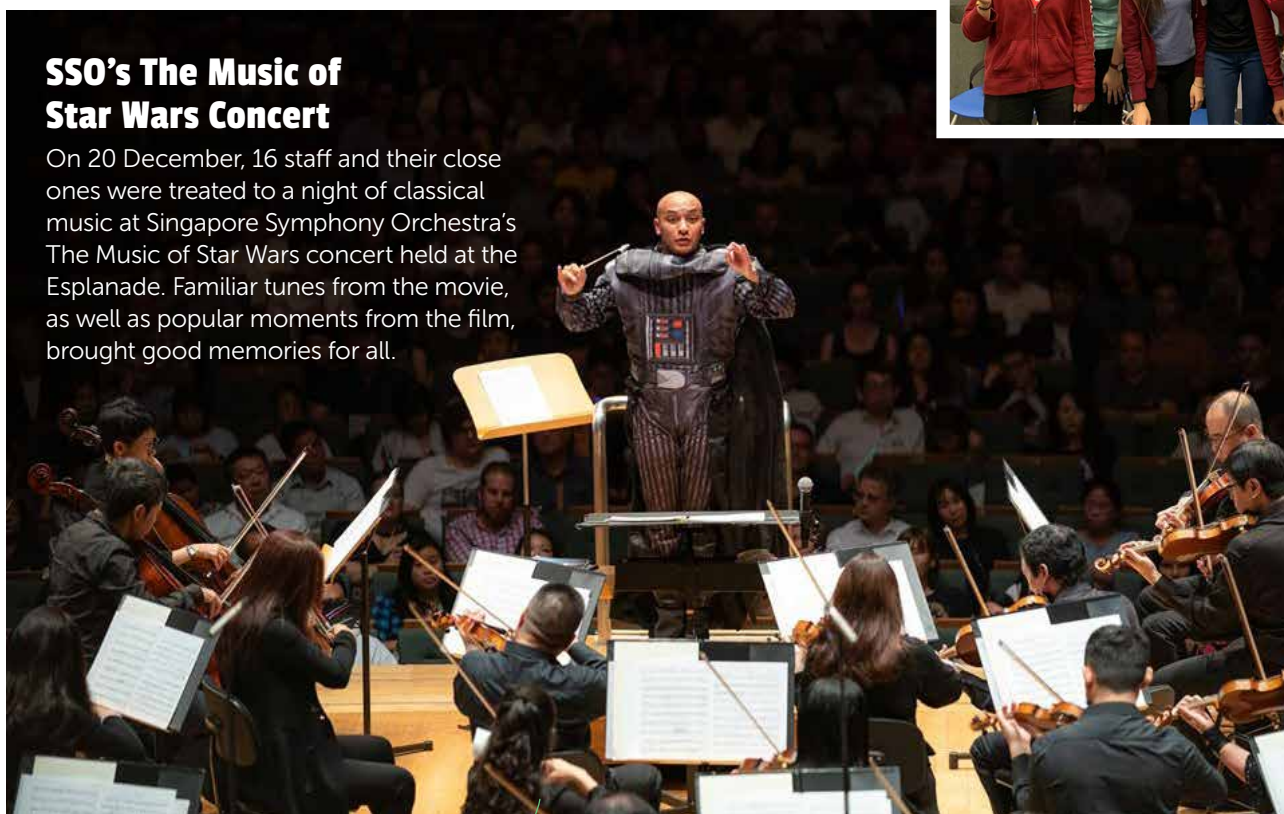
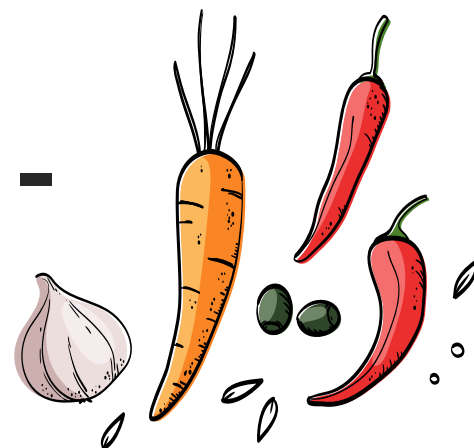


Photo credit: Singapore Symphony Orchestra



My Family's Favourite Recipe - Chicken Dum Briyani

By Gunanathan Rathinam



Gunanathan Rathinam from NSL Chemicals emerged as the first runner up for the "My Family's Favourite Recipe" competition with

his Chicken Dum Briyani dish. Ever

wondered what 'Dum' means in Indian cuisine? It is a unique cooking method of applying indirect heat while slowly warming up the ingredients. This slow cooking process helps in releasing flavours and aroma of spices.

Being an avid home cook, he also gave three simple tips on elevating the dish. Firstly, Chicken Dum Briyani can be served along with onion raita, a side dish comprising of freshly cut onions soaked in plain yogurt and topped with some coriander leaves. Secondly, a boiled egg adds value to any kind of Briyani. Lastly, it tastes better when served three to four hours after cooking.



Read on to find out how this delicious dish is made.



Ingredients

- 500g of chicken
- 500g of basmati rice
- 750ml of water
- 2 whole big onions
- 2 whole tomatoes
- 20 cloves of garlic
- 50g of ginger
- 2 pieces of green chilli
- 1 handful of mint leaves
- 15 stalks of coriander leaves
- Indian briyani spice mix: cinnamon, bay leaf, cardamom, cloves, star anise, dried kapok buds, dried rose (2 pieces per spice)
- 2 tablespoons of chilli powder
- ¼ tablespoon of turmeric powder
- 4 tablespoons of salt
- 4 tablespoons of ghee
- 4 tablespoons of cooking oil



Recipe

1 Wash chicken with plain water thrice and add turmeric powder to water on third wash. Turmeric powder is a natural antibiotic, antiseptic and has medicinal properties.

2 Cut the onions, tomatoes, ginger and garlic.

3 Heat the cooking pan of 10 to 15l capacity in direct flame and add cooking oil, ghee and allow it to reach high heat with low flame. Do not overheat.

4 Wash 500g of basmati rice and soak in water. Make a thick paste of chopped garlic, ginger and chilli powder together with few spoonfuls of water.

5 When the heating pan is heated, add briyani spices and sauté it. When ingredients are simmering, add onions and $\frac{1}{4}$ tablespoon of turmeric powder. Sauté it till the onions turn transparent.



6 Add tomatoes and salt. Mix well and allow it to heat until tomatoes soften. Add mint leaves.



7

After half a minute, add prepared thick paste of garlic, ginger and chilli powder. Mix well to spread paste across the dish. Leave the contents to boil on low flame. Keep stirring the mix while ensuring bottom content is not burnt.

13 Stop the flame and top it up with fresh coriander leaves for aroma. Chicken Dum Briyani is ready to serve!



12 Allow it to 'dum' for 10 minutes and check if the water is completely absorbed by contents.

11 After 10 minutes, when contents are boiling under direct flame, keep a frying pan on direct flame and shift the cooking pan over the frying pan. This indirect and slow heating process is called 'dum'.

10 Drain the water from soaked rice and add the rice to cooking pan. Stir well and make sure the rice is evenly spread.



9 Add 750ml of water and allow it to boil until chicken is almost cooked.

8 Add prepared chicken and stir well. Allow it to heat for two minutes.





Dangers of Fatigue in the Workplace

Fatigue is a feeling of tiredness, which may adversely affect an individual's physical and mental performance. At the workplace, if fatigue amongst employees is not managed and addressed, it may lead to near misses or work injuries. On the road, driver fatigue may also result in serious road accidents. It was reported on Channel NewsAsia in October 2017 that driver's fatigue from a "gruelling schedule" and the "monotonous nature of prolonged driving" may have caused the driver to fall asleep at the wheel, resulting in an accident that killed two e-bike riders along West Coast highway in 2016.¹

We need to understand the causes of fatigue, its symptoms and how to mitigate it.

What are the causes of fatigue?

From "Workplace Safety & Health Guidelines on Fatigue Management²", fatigue may set in when a person's biological clock is disrupted by work related factors or individual factors.

Work related factors may include:

1. Roster patterns
2. Length of shifts and time worked
3. Poor work scheduling and planning
4. Timing of shifts (e.g. night shift)
5. Insufficient recovery time between shifts
6. Long period of time awake
7. Inadequate rest breaks

Individual factors may include:

1. Poor quality of sleep
2. Insufficient sleep duration due to family commitments
3. Sleeping disorder



What are the symptoms?

At the workplace, the supervisor should keep a lookout for these signs of fatigue so that control measures can be taken before accident occurs.

Common symptoms of fatigue include the following.

1. Slower reaction time
2. Compromised eye-hand coordination
3. Slowed thinking
4. Excessive sleepiness
5. Poor judgement of distance, speed and/or time

How to prevent?

Effective prevention would have to start from risk assessment. By identifying work activities that can result in fatigue as a hazard, we will be able to develop and implement engineering or administrative control measures to mitigate the risks of fatigue.

Improvements or changes to the work environment can help to delay the onset of fatigue. Sufficient lighting at the workplace can improve alertness and performance. For outdoor work activities under hot weather conditions, shelters should be provided to reduce risk of fatigue and heat stress to the workers.

Administrative controls can also be taken.

- In accordance to Ministry of Manpower guidelines, shift work must be limited to not more than 12 hours, including overtime.
- Keep or limit night shift work to a minimum. Complex tasks should be scheduled during the day.
- Adopt forward-rotation shift, if shift rotation cannot be avoided. This means that employee on the morning shift should be rotated to afternoon shift and subsequently to the night shift.
- Shift schedule should be provided and communicated to employees ahead of time.
- Ensure adequate manpower within the shift for work activities to be done safely.
- Implementation of technologies to detect the onset of fatigue and sound an alert to the driver.

¹ <https://www.channelnewsasia.com/news/singapore/west-coast-e-bike-deaths-fatigue-may-have-caused-driver-to-fall-9329022>

² https://www.wshc.sg/files/wshc/upload/cms/file/2014/Fatigue_Management.pdf



How to Protect Yourself from Dengue Fever



Protect yourself from dengue fever with tips from Dr Chua Ying Ying, Consultant, from the Department of Infectious Diseases at Singapore General Hospital.

How you can protect yourself and your home from the Aedes mosquito and dengue fever.

Dengue fever is a mosquito-borne viral disease that is widespread in Singapore and other tropical countries. It is caused by the dengue virus and is transmitted through the bite of an infected Aedes mosquito.

Dengue fever symptoms include a fever, intense headache, body aches, joint pains, loss of appetite, nausea, vomiting, and skin rashes and mucosal bleeding. There is no specific treatment for dengue fever, but adequate fluid intake and bed rest is important. Most patients recover within two weeks.

However, dengue fever can turn severe, leading to dengue haemorrhagic syndrome and dengue shock syndrome.

According to the World Health Organisation (WHO) 2009 case classification, dengue is classified into dengue without warning signs, dengue with warning signs and severe dengue. It is important to recognise the warning signs such as abdominal pain, persistent vomiting, mucosal bleeding, lethargy and fluid accumulation as it may progress to severe dengue. Even dengue patients without warning signs can develop severe dengue. Dengue fever with warning signs and severe dengue require aggressive emergency treatment and hospitalisation.

The National Environment Agency (NEA) is spearheading the fight against dengue fever in Singapore by raising public awareness about mosquito breeding and destroying existing breeding sites.

"As an individual, you can play your part in the fight against dengue fever by protecting yourself and your home environment from the Aedes mosquito," says Dr Chua Ying Ying, Consultant, Department of Infectious Diseases, Singapore General Hospital (SGH), a member of the SingHealth group.

How to protect yourself from getting dengue fever

You can protect yourself against dengue fever by taking the following precautions:

- Protect yourself against mosquito bites
- Prevent mosquito breeding inside and outside your home
- Avoid visiting areas prone to mosquitoes

If you live in a neighbourhood identified as a dengue cluster*, or if you are visiting a dengue cluster or a mosquito-prone area, heed the following advice:

1. Apply mosquito repellent, ideally one containing DEET.

- Apply it to exposed skin and/or clothing, using enough to cover the entire area. Do not apply it under clothing.

- Do not apply it on cuts, wounds or irritated skin.
- Do not apply it near the eyes or mouth, and apply sparingly around ears.
- When using sprays, never spray directly on the face. Spray it on your hands first and then apply it to your face. Wash your hands afterwards.
- Do not allow children to handle a repellent. When using it on children, apply it to your own hands first and then put it on the child. Avoid applying it to children's hands.
- Do not use an insect repellent for infants under two months of age.

2. Wear long-sleeves and long pants to cover your arms and legs.

3. Use mosquito nets while sleeping.

"If you or your child gets a rash or any other negative reaction from an insect repellent, wash it off with mild soap and water and stop using the product. Consult a doctor if the condition persists," says Dr Chua Ying Ying.

** A dengue cluster is formed when 2 or more dengue cases occur within 14 days and the homes of the dengue victims are within the distance of 150m. (NEA website)*

Reproduced with permission from HealthXchange.sg: Trusted health tips tailored for Asia, by Singapore's largest academic medical centre, SingHealth.

HealthXchange.sg

Ref. S13

Terms of Use / Disclaimer

All information provided within this web and mobile application is intended for general information and is provided on the understanding that no surgical and medical advice or recommendation is being rendered. Please do not disregard the professional advice of your physician.

For more information and health-related articles, visit www.healthxchange.sg.