

# The Pyongyang Times

Democratic People's Republic of Korea

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## LEAD

### Wholehearted devotion to people grabs the limelight

Supreme Leader Kim Jong Un has been in the world media limelight throughout the year as he has devoted himself to the welfare of the people.

The outbreak of COVID-19 last year struck the world with anxiety and terror, posing constant threat to human life.

At this juncture the Supreme Leader called an enlarged meeting of the Political Bureau of the Central Committee of the Workers' Party of Korea and made a firm decision and took crucial measures to set up a powerful preemptive and blockading state emergency infectious disease prevention system to prevent the inflow and spread of the pandemic and concentrate all efforts on ensuring the safety of the people.

Later he attended the groundbreaking ceremony of the Pyongyang General Hospital, shovelled the ground first for its construction and pressed the button of the blasting machine for its groundbreaking.

He said it is the top priority task to protect and improve the health of the people, which should be shouldered and implemented regardless of whether the conditions are favourable or unfavourable. Through the construction of the general hospital the present-day campaign for a frontal breakthrough should be made consistent with the spirit of making selfless, devoted efforts

for the good of the people, he noted.

The Suncheon Phosphate Fertilizer Factory, where the Supreme Leader made the first field inspection tour of the year, was wonderfully built as a creation of self-prosperity and self-reliance, laying a foundation for increased grain production.

Party and state meetings were held in succession unprecedentedly this year, including the enlarged Politburo meeting of the WPK Central Committee in February which discussed measures to step up the construction of dwelling houses in Pyongyang and the provinces. Discussed in all the meetings as the first agenda item was the matter of protecting the personal safety of the people and stabilizing their living.

In early August when it rained heavily and downpoured in Taechong-ri, Unpha County of North Hwanghae Province, for days due to the influence of the seasonal rainy front, submerging a large area of farmland and demolishing many dwelling houses, the Supreme Leader visited it before anybody else and took detailed measures to rehabilitate the flood-hit area.

He walked along the lanes across the fields in South Hwanghae Province to learn about the damage caused by Typhoon No. 8 in late August and inspected South Hamgyong Province afflicted by Typhoon No. 9 in early September.

He called an enlarged meeting of the Executive Policy Council of the WPK Central Committee on the spot to organize a disaster relief operation and inspected the disaster-stricken areas, before writing an open letter to all the Party members of Pyongyang to call for turning out in the reconstruction campaign in North and South Hamgyong provinces.

In hearty response to his call, the elite divisions of Party members from the capital city and the Korean People's Army soldiers were immediately dispatched to the afflicted areas and pushed the campaign to finish the construction of dwelling houses in a short time.

Thanks to the burning love and devotion of him who gives top priority to and absolutizes the people's interests and convenience, traces of natural disasters were removed and villages of modern dwelling houses sprang up in succession to meet the desire of the flood victims and the requirements in their life in all the disaster-stricken areas.

The untiring efforts the Supreme Leader devoted to protecting the country and people from the global pandemic and severe natural disasters this year, which was unprecedentedly eventful and difficult due to the grave situation, have been engraved on the minds of the Korean people as a precious memory.

By Pang Un Ju PT

## CAMPAIGN

### 80-day campaign goals achieved successively

The number of units that hit their 80-day campaign targets is on the increase in different economic sectors.

The Chongchongang Thermal Power Station carried out its yearly plan until November 29, and the Pukchang and Pyongyang thermal power complexes are boosting power production every day by increasing the operational rate of generating facilities and generating efficiency.

Suphung, Taedonggang, Kanggye youth and other hydropower stations exceeded their monthly targets 1.4 times, while the Pujongang Power Station carried out its monthly plan at over 110 percent by manufacturing and installing a digital speed regulator.

The February 8 Vinalon Complex carried out its polyvinyl chloride production plan 1.4 times ahead of schedule and the Suncheon Chemical Complex stepped up the production of caustic soda to overfulfil its daily plan by 10 percent.

The mining industry hit the campaign targets on major indices as it exceeded apatite concentrate production target 1.2 times.

The Unnyul Mine is overfulfilling its daily plans after achieving its campaign target ahead of schedule.

The Munphyong Smeltery more than doubled the production plan for nonferrous metals and the Ssangryong Mine implemented its phosphate fertilizer production assignment. The Jaeryong Mine

also exceeded the campaign target by 20 percent as of November 26 as it fulfilled its daily production plan over 1.5 times.

The rail transport sector staged an increased transport drive in a dynamic manner. The Pyongyang Railway Bureau overfulfilled its monthly transport assignment, while the Kaechon, Hamhung, Chongjin and Rason railway bureaus increased their transport capacity through scientific and rational organization and command.

The Ranam Coal-mining Machine Complex reached its campaign target till late November and the Tokchon Coal Mine overfulfilled its tunnelling plan every day.

The Pyongyang Kim Jong Suk Silk Mill exceeded its campaign target by 85 percent and the Mangyongdae Aeguk Aluminium Sash Factory surpassed its campaign target by 19 percent as of December 5. The Pyongyang Changgwang Garment Factory and Pyongyang Children's Wear Factory attained their campaign goals by upgrading production processes and introducing advanced garment design programs.

Without resting on its laurels after carrying out its yearly plan ahead of schedule, the Wonsan Leather Shoes Factory proceeded to stage an offensive drive to fulfil its footwear production plan included in the 80-day campaign target till late November.

By Yun Kyong Il PT

## COAL

### Young miners strike five-year targets

More than 60 youth shock brigades and some 7 300 young people in the coal-mining industry sector have attained targets of five-year strategy for national economic development ahead of schedule.

The Pukchang Area Youth Coal-mining Complex organized a high-speed tunnelling contest between its youth shock brigades to kindle the zeal for emulation drive, while learning good

experiences from advanced units. In this course, three of them accomplished their 10 years' quotas.

More than 4 000 young employees of the Suncheon Area Youth Coal-mining Complex reached goals of five-year strategy before the time set.

Members of the Kang Ho Yong Youth Shock Brigade under the Chonsong Youth Coal Mine carried out the three

years' tunnelling quotas through a collective innovation drive in the run-up to October 10 this year.

Eighteen youth shock brigades in the Tokchon Area Coal-mining Complex hit the goals for five-year strategy in succession.

Youth tunnelling workers of the youth shock brigades completed their tunnelling assignments over 150 percent.

The number of youth shock brigades and young miners that carried out the goals of five-year strategy is on the rise at Hamnam, Chonnae, Kangdong and Onsong area coal-mining complexes.

KCNA



Locals move to new houses modernly built in the Komdok area that sustained heavy natural disasters.

SEE HOUSES PAGE 6

## REVIEW

# Independence boosted in economic construction

The Seventh Congress of the Workers' Party of Korea, which was held in May 2016, underlined the need to concentrate all efforts on promoting the independence and Juche character of the national economy.

This assignment reflects the firm determination of the WPK to make the people well-off by making a breakthrough in the revitalization of the overall economy.

Over the past five years, the DPRK equipped itself with an all-round and comprehensive economic structure capable of guaranteeing economic development and satisfying the material demands in the people's living by dint of domestic production and constantly undated and perfected it.

The metallurgical industry increased iron and steel output by taking steps for a steady supply of raw materials, fuel and power to such giant producers as Kim Chaek and Hwanghae iron and steel complexes.

The chemical and machine-building industries made strenuous efforts to put equipment and production processes on a Juche-oriented and modern basis and remarkable achievements were also made in coal and mineral production and rail transport.

In this course the Koreans

built the Sunchon Phosphate Fertilizer Factory and various kinds of farm machines like 80hp tractor, wind turbines and fishing boats of Hwanggumhae family and developed a six-axle AC electric locomotive.

They also carried out the projects for developing railway designs and construction technologies and a technology of improving the quality of coal crushing ball and key projects in the hi-tech field.

Recycling proceeded briskly all across the country as a major dynamic of economic development.

Achievements were also made in the efforts to attain self-sufficiency in food.

The agricultural sector introduced advanced high-yield farming methods to achieve success despite unfavourable weather conditions last year.

Mountainous areas also increased grain output by giving precedence to the introduction of good strains of crops and innovating cultivation methods so that land could be utilized as efficiently as possible.

What is noteworthy is that the South Hwanghae provincial waterway, a large-scale irrigation network, was completed this year, to provide sufficient irrigation water to the vast tracts of west coastal granary, thereby laying a firm

foundation for increasing grain production.

The country pushed the construction of power plants according to a long-term plan in the direction of giving definite precedence to energy production over economic growth.

It finished the Phalhyang dam for the Orangchon Power Station and constructed many minor hydropower stations including the Munchon Army-People Power Station.

Pyongyang built large solar power generating capacity as scores of units established a system-parallel power generation system and many other units and families introduced an independent solar power generation system.

Over ten units in the city including the Taesong Vegetable Cooperative Farm and Tudan Duck Farm set up an electricity generating system based on rice chaff or methane gasification to greatly benefit from it.

At present the Korean people are waging the 80-day campaign of loyalty aimed at greeting the Eighth Congress of the WPK with notable labour feats. The campaign is a dynamic drive to attain the targets of the five-year strategy for national economic development set forth at the Seventh Party Congress.

By Jong Hwa Sun PT

## INSPECTION

# Premier Kim visits industrial units

Premier Kim Tok Hun, who is member of the Presidium of the Political Bureau of the Central Committee of the Workers' Party of Korea, inspected the Sunchon Pharmaceutical Factory, the Unsan Prospecting Machine Factory and Pyongyang Department Store No. 1.

Looking round the production processes of the pharmaceutical factory, he underlined the need to decisively increase the production of medicines. He took measures to put the pharmaceutical industry on a self-supporting and modern basis through the domestic production of raw and other materials, direct efforts to the production of over-the-counter and household medicines and update production processes.

At the prospecting machine factory he urged its officials, technicians and workers to develop more mobile prospecting equipment that suit the geographical conditions of the country.

The field consultative meetings discussed the issues of boosting the production of medicines onto a higher level and produce more efficient prospecting equipment of all kinds.

As he inspected the operation of Pyongyang Department Store No. 1, the Premier called on its officials and employees to improve their service and scrupulously organize the supply of goods in the spirit of devotedly serving the people.

KCNA



Premier Kim Tok Hun (left) on his visit to the Unsan Prospecting Machine Factory.

## Nationwide

### Pig farm renovated



The Phyeongbuk Pig Farm has recently undergone a renovation project.

The processes for realizing IT-based production and management and mass-production of feed were modernly refurbished, laying another firm material and technical foundation for boosting pork production.

### Anthracite blast furnace installed at steel works

The Sunchon Steel Works in South Phyongan Province has established a new type of energy-saving iron-making system fuelled by anthracite and using no oxygen.

The installation of the anthracite blast furnace has provided another material and technical foundation for

meeting growing demand for iron and steel and contributing to developing the provincial economy.

### Lead refining system upgraded



The Munphyong Smeltery has renovated its lead smelting system based on a rotary kiln.

It finished the production of fire bricks and the installation of the kiln body and set up an integrated control system that can monitor and manage in real time the whole process from raw materials feeding to shipment.

### Sewage purifying plant built in Hyesan

Hyesan City in Ryanggang Province has built a sewage purifying site into which advanced technology has been applied based on a biological purifying method, thus making it possible to better protect

the ecological environment by purifying industrial waste water and life sewage from factories and residential quarters.

Furnished with dozens of settling ponds and sewage purifying equipment, the purifying site is of high economic effectiveness as it saves a large area of building site while ensuring high purifying rate and producing organic fertilizer.

### Different projects completed



An open-air ice rink has been built in Hyangsan County and the Kujang Fish Farm reconstructed in North Phyongan Province.

Built on the banks of the Chongchon River, the ice rink has a 250-seater auditorium and over 2 100 square metres of ice run, and the underground cellar is furnished with cultural and welfare

facilities including shower rooms.

The Kujang Fish Farm has built or rebuilt a fattening fish pond, production building, hatching room, general control room, sci-tech learning space and others.



### Chemical Complex overfulfils daily plan

The Namhung Youth Chemical Complex has introduced over 160 technical findings including the one on establishing the production process for carbon disulphide.

And it has remodelled the gas generation system and improved the quality of catalyst to successfully turn out ammonia.

### Tractor factory improves performance of products

The Kumsong Tractor Factory has improved the performance of tractors

through a mass technical innovation drive.

It made a new-type gear, designed and manufactured a hydraulic steering gear to reduce the turning radius and ensure the smoothness of tractor, and recycled floor rubber mat.

After completing the headlight and gauge board, it carried out the general assembly of tractor before giving it a successful trial run.

### Huge blasting helps step up tideland reclamation

A 300 000-cubic-metre blasting was conducted by the General Tideland Reclamation Enterprise of North Phyongan Province, providing a breakthrough for pushing the construction project of tide embankment No. 3 in district No. 2 of Woldo tideland.

The Posan tideland reclamation branch station carried out its daily assignments at over 150 percent every day and greatly advanced the blasting date.

THE PYONGYANG TIMES

COUNTY

# Every possibility tapped for local economic growth

“Each local area has enough potential for its development. The point is how to find out and use it,” said an official in Nyonghyon County, North Phyongan Province.

The county, however, used to bring building stones from the other area far away from it, which required a great deal of funds and labour.

Therefore, the county officials trekked along rivers and through rugged mountains in search of building stone sources, which they found out in large quantities.

“A comparative analysis between our trial product and the processed stone of a local area renowned for stone processing

showed that ours is of high quality,” said the manager of the county construction company.

Encouraged by this, the county built a granite production base and equipped it with necessary facilities in a matter of a few months and turned out building stones in all sizes and colours with the stones from rivers.

It used them in sprucing up different units and buildings including a schoolchildren’s hall, gym and other structures as part of its ambitious effort to give a total facelift to itself in a characteristic way.

By-products from stone processing were recycled to produce columns, rails, flower pots and the like.

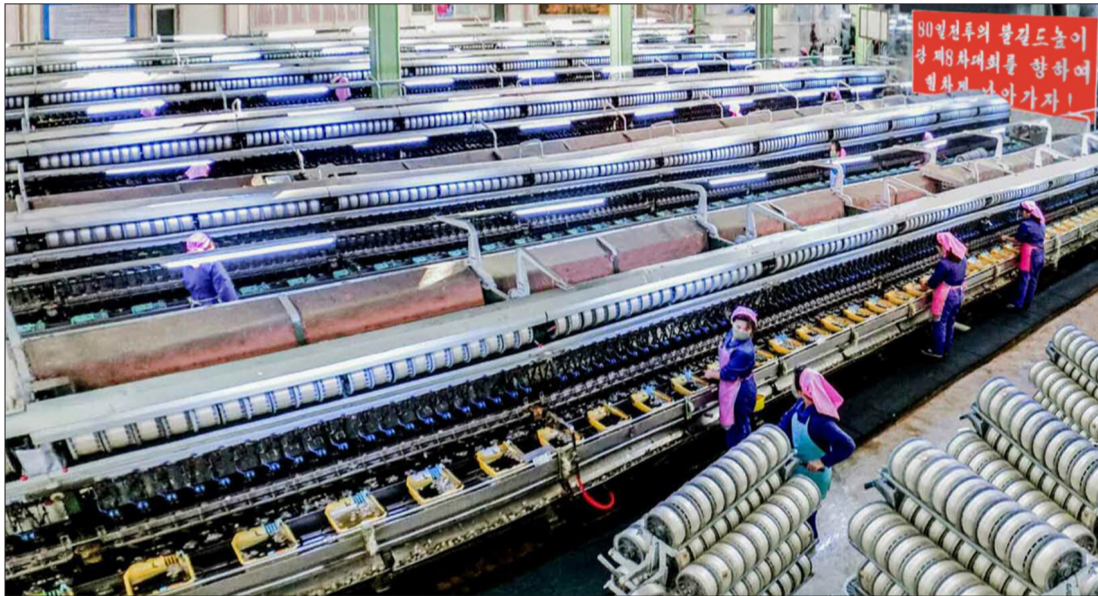
The demand for processed stone goods including building stones of high quality constituted an incentive to further development of the county.

The county which established an acrylic paint production base is using stone dust from stone processing in construction.

It is now engaged in the development of a quarry to increase granite output and the upgrading of processing facilities to ensure the mass-production of stone products.

In addition, it is pushing the construction of a tannery at the final stage.

By Kim Kum Myong PT



JONG CHOL HUN / RODONG SINMUN

The 80-day campaign targets are carried out at 200 percent at the Pyongyang Kim Jong Suk Silk Mill.

FISH FARM

# Local materials used to make feed additive

The Pyongyang Catfish Farm uses domestically made microorganisms to mass-produce feed additives.

The liquid fermentation ground and lab at its fermented feed processing workshop turns out different kinds of microorganisms like yeast and activated enzyme compounds,

vitamins and antibiotics, which are used in making feed additives.

According to manager Pak Yong Rok, the production of feed additives with locally available raw materials has halved the production cost as against the past.

The farm adds microorganisms

to the mud drained from fish ponds to ferment and use it as feed for fish and tubifex, insects and larvae as well.

“We are now working to make the most of waste water from a nearby thermal power plant and improve the water quality of ponds,” said Ju Ka Ram, chief of the technical department.

To improve water quality, the farm installed such devices as ozone generator and put microbial compounds into settling tanks and ponds, thus increasing the survival and fattening rates of catfish by more than 10 percent over previously.

In addition, it established a process of culturing *Gropha frpmdpsa* based on an immunity-reinforcing agent for feed additives and ferments corn cobs with microorganisms to use them as feed.



HAN KWANG MYONG / RODONG SINMUN

A pond is teeming with fish at the Pyongyang Catfish Farm.

By Chae Hyang Ok PT

COSMETICS

# Factory pushes projects for new products

The Pyongyang Cosmetics Factory makes proactive efforts to develop new products.

“We are now engaged in the development of highly effective natural cosmetics and perm agents that are less irritating to skin,” said Kim Pok Sil, deputy chief of the cosmetics research institute.

As to the snail cosmetics, researcher Ryang Myong Ho said the mucus of the mollusc used in the products is rich in polysaccharide which is very efficient for skincare.

The research group of the factory developed a method of collecting mucus without killing the animal.

“The main ingredient of the skin cell growth-promoting cosmetics is a cell growth-encouraging agent which was made by applying bioengineering and nanotechnology that belong to high technology,” said section chief Kim Jong Hui.

According to developers, as people advance in age their skin grows old since the cell growth-encouraging agents decrease.

These cosmetics ensure skin gloss and elasticity, remove blotches and freckles, root out senile plaque and pigmentation and make horny layer smooth to reduce wrinkles.

“I was fretful about my blotches when I was pregnant.

By Jong Hwa Sun PT



PAK KWANG HUN

Researchers at the Pyongyang Cosmetics Factory conduct an experiment to measure effective elements in plant extracts.

But they disappeared 15 days after I began to apply the cosmetics,” said 33-year-old Kim Kum Ju living in Jungsin-dong, Sosong District, Pyongyang.

Although they were unveiled recently, they have already become a favourite with middle-aged and old women.

In the course of developing perm agents relying on locally available raw materials, the factory came up with liquid and emulsive ones.

According to hairdressers, these are highly efficient while causing no damage to hair.

Research into a temporary cream dye is now nearing completion. They said it has no side-effects and is better than the existing permanent and semipermanent ones in the light of beauty effects.

CEMENT

# Home-made alumina cement becomes available

The Silicate Engineering Institute of the State Academy of Sciences has developed a technology for producing alumina cement with locally available materials.

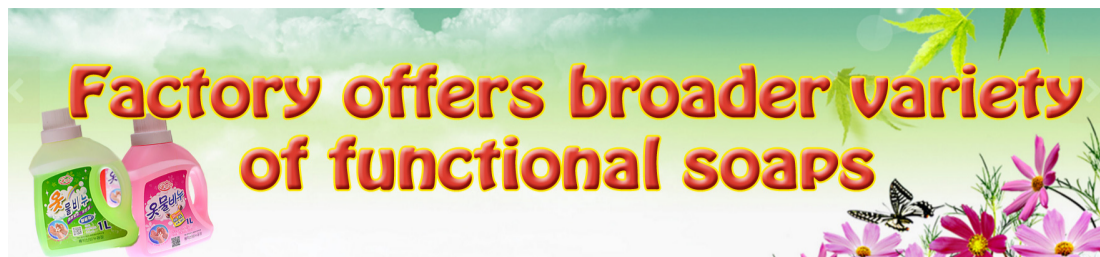
In the past, it relied on imported industrial alumina in the production of alumina cement which is used as a heatproof lining material for thermal equipment such as boilers at power stations.

Researchers at the institute developed a technology for making alumina cement from low-quality bauxite and limestone.

The Sunchon Thermal Power Station newly set up an alumina production process, whose trial run proved that its quality indexes such as compressive strength after one week and after thermal treatment were not inferior to the imported one. And its production cost is much cheaper than the import price.

The home-made alumina cement can be applied to not only the electric power industry but also the metal and chemical industries and to urgent repairs of roads, bridges and railway.

By Kim Il Jin PT



The Ryongaksan Soap Factory has established new production processes geared to ensuring domestic production of raw materials for liquid soap and directs much effort to the development of soaps.

Among the new processes is the fatty acid methyl ester and potash soap production process.

“The esterification of natural oil can completely remove impurities, but this requires hefty investment and much labour for finding the optimum condition for the reaction and installing more facilities,” said Jong Myong Hwa, chief of the technical department.

The technicians analysed the effects of oil quality indexes on the fatty acid methyl ester synthetic reaction, and set the criteria of quality indexes of the oil needed for the reaction and selected the rational condition for the reaction. On that basis, they established a process for synthesizing various surface active agents with locally-available natural oil as a main ingredient.

They also set up processes for refining *Evodia daniellii* oil and salt.

They developed and introduced new analytical methods including those for measuring cleansing power and washing load mass of liquid laundry soap and analyzing anionic surface active agent content and effective matters.

The factory applies to soap production various kinds of functional substances such as biolytic enzyme and anti-discoloration agent, fibre lubricant, stabilizer and skin protection agent and natural essences like those of ginger and lemon.

At present, the factory turns out a wide variety of soaps and its most sought-after products are liquid laundry soap, detergent and washing gel.

The washing gel made from *Evodia daniellii* oil is regarded as a popular skincare product among both men and women as it contains different functional elements.

The biolytic enzyme liquid laundry soap can easily remove stains left by fruit juice and

printing ink from clothes and the sterilizing liquid laundry soap prevents moulds and germs from growing on winter clothes.

Customers unanimously praise the factory’s liquid soaps, saying they are easy to handle and have great cleansing strength and various functions.

Last year, the factory developed a shampoo that removes extraneous matters away from the skin and fur of riding horses.

Its products were highly appreciated at several exhibitions including the 1st National Cosmetics Exhibition last year and registered as February 2 Products.

By Chae Hyang Ok PT



Researchers at the Ryongaksan Soap Factory analyse the composition of a new liquid soap.

RYU KWANG HYOK

## HEALTH

# Device helps treat prostate gland diseases

Recently, technicians of the Pyongyang medical appliances technology company developed a portable supersonic prostate gland treatment device.

The device, to which

electronic and acoustic and programming technologies have been applied, consists of parts for supersonic generation, medicinal injection and outlet, and supersonic output control

and display. It weighs 80 grams and intensively incorporates such treatment functions as local massage, medicinal injection, thermotherapy and physicochemical treatment.

Developers say that the device can effectively cure not only prostatitis and prostatomegaly but also rectitis, haemorrhoid and other gynecopathies in a short period.

The device is powered by 170-230V of AC or 12V of DC. A treatment takes about 15 minutes. Its supersonic generating part is put into the rectum and medicinal substance is slowly injected into the inlet once a day.

A cycle of treatment is about a half month and you will see most of all symptoms improved if you apply it for two cycles at one-month intervals.

Since the new type of treatment device is non-infiltrative one, it causes no pain to patients nor side-effects or complications.

The device is so easy to handle that both medical workers and ordinary people can use it.



SONG JONG HO

A portable supersonic prostate gland treatment device made by the Pyongyang medical appliances technology company.

By Song Jong Ho PT

## DESIGN

# Forming unusual ties with machine building



Hwang Hyon Chol, section chief of the Control Machine Institute under the State Academy of Sciences, works on a new type of control machine.

There is a doctor who distinguishes himself in the field of CAD/CAM at the Control Machine Institute under the State Academy of Sciences.

He is Hwang Hyon Chol, chief of the process designing office. He was born in Tokchon, South Phyongan Province.

“My father worked at the Sungni Motor Complex. Whenever I visited the factory following my father, I was really fascinated by machines which produced lorry parts automatically. Perhaps, it influenced me to major in machines,” said Hwang.

According to U Ok Nyo, teacher in charge of him at the middle school, Hwang showed special interest in such natural science subjects as mathematics and physics.

He enrolled at the University of Sciences after winning the national multi-subjects contest in his middle school days.

“At that time, I eagerly desired to enter the automation faculty, but I became an applied mathematician. I decided to solidify the basis before designing and programming,” recalled Hwang.

After graduating from the university with top honours, he was appointed to the Control Machine Institute under the State Academy of Sciences as he had desired.

A few years later, he began to cut a conspicuous figure in the control machine field related to machine designing and processing programs.

At first, he developed the shoe-mould production program based on the CAD/CAM technology to introduce it into the Sinuiju Footwear Factory. Therefore, it has made it possible for the factory to satisfactorily process a variety of shoe-mould and other moulds for everyday use. His creation was generalized across the country as it was designed to help save lots of raw materials and manpower while raising quality.

He then brought out CAD/



**You should do your best to the end and be highly responsible—this is Dr Hwang’s view and it is the disposition of him who does not know failure in his research projects,”**

Kang Chi Won, fellow of Hwang Hyon Chol

CAM systems capable of manufacturing any complicated types of turned and sculptured surface products.

He unveiled the five-axis simultaneous control hydraulic turbine blade machining centre with complicated free form curved surface for the first time on the domestic front.

“It is important to separate fully-grown tree saplings from container along with cultivating tree saplings in an industrial method. Roots of tree saplings grown in containers are entangled and stretch out from the containers. The height and thickness of tree saplings are diverse according to their growth,” Hwang said.

He designed an automatic flow line, from separating tree saplings to packaging, thus contributing to making production processes unmanned at tree nurseries.

For such research hits, he was awarded twice the February 16 Science and Technology Prize, the top honour in the country.

“You should do your best to the end and be highly responsible—this is Dr Hwang’s view and it is the disposition of him who does not know failure in his research projects,” said researcher Kang Chi Won.

By Jong Hwa Sun PT

## EDUCATION

# Students can conduct experiments at home

"Gone are the days when experiments and practical training were done only at school," said Kim Chang Suk, director of the Taedonggang District teachers in-service training centre in Pyongyang. "We've renovated the existing methods of experiments and practical training so that students can actually apply their knowledge in their everyday life."

As big efforts have been concentrated on improving the practical abilities and skills of students throughout the education sector in recent years, the teachers of the centre found ways to move the sites of try-it-yourself tests, experiments and practices from kindergartens and primary and middle schools to the homes of students and

children.

In order to translate their ideas into reality, they are now formulating new teaching programmes which include the replacement of reagents, apparatuses and other things used in try-it-yourself tests and experiments at kindergartens and schools in the district by household goods and readily available things.

Among the substitutes are empty plastic bottles and cartridges of ballpoint pens and other household waste, so the new methods can provide an opportunity for waste recycling, said teacher Ri Hyon Suk.

According to teacher Ri Jong Su in charge of chemistry, 22 kinds of reagents and seven kinds of apparatuses needed for chemical experiments at middle

school can be substituted by household things, for example calcium carbonate by shells of eggs and clams, plaster by fragments of sculptures and measuring cylinders by syringes.

"I successfully separated alcohol from liquor by using an injection tube and a plastic bottle with iced water inside. When liquor is heated to 80 degrees centigrade, alcohol whose boiling point is lower than water starts to evaporate. And the vapour passes the tube wrapped around the cold plastic bottle and then alcohol drips from the end of the tube. It was really fantastic and enjoyable," said Jang Chol Su, student at Tongmun Junior Middle School in Taedonggang District.

Teacher An Yong Mi who is in charge of a primary school said that an experiment for proving that "air has volume" can be done anywhere with just water, table-tennis ball and empty plastic bottle and ballpen cartridge.

Teachers at the Munhung Kindergarten in the district invented handicrafts that children can make with waste things such as making a tumbler with cotton and a ship with bottle caps. The handicraft models can be made to sing, dance and do various things on the computer screen using an AI. Looking at them, children feel pride and joy in their creations and develop independent creativity.

By Kim Rye Yong PT



The Taedonggang district teachers in-service training centre works to help teachers improve qualifications through an online education network.

PAK KWANG HUN

## BOOK

# Best-sellers of year

"The cultural influence from conventional books can never be replaced by that of e-books. For elderly people including me, reading them is just the process of savouring culture. It is an unusual pleasure bestowed by paper books for me to put my full energies into the work and remember its content every moment," said Choe Son Hui, resident in Phalgol-dong No. 2 of Mangyongdae District, Pyongyang.

The demand for conventional books is still growing today when e-publications are closely linked with daily life.

Full-length novel *Red Glow Spreading over the World* published by the Art and Literature Publishing House as part of the cycle of novels "Immortal Guidance" has aroused the great interest of people.

"Although nearly a decade has passed since Chairman Kim Jong Il passed away, I'm convinced fully that the

Korean people still remember his immortal leadership exploits and noble traits through this book," said Kim Song Il, an official at the Art and Literature Publishing House. He added that the book has become a bestseller as it vividly formulates the Chairman's exploits of defining Kimilsungism as the guiding ideology and the ultimate programme of the Workers' Party of Korea through contemporary historical facts.

*Rejuvenation*, the first one of the cycle of novels "Immortal Landmarks", showing the greatness and revolutionary exploits of Supreme Leader Kim Jong Un, is also appealing to the readers.

"I started reading the book with great interest as it is the first full-length novel describing the Supreme Leader's personality traits as a great man. I was deeply impressed by his noble intention to build ours into a country of education and a talent

power," said Choe Son Hui.

Meanwhile, full-length novels *Swift Current of Life* and *Things to Be Lost and to Be Got* depicting patriotism and spirit of defending the country cherished by the Koreans are now sought-after among readers.

In particular, the latter which is set against the background of the period of strategic, temporary retreat during the hard-fought Fatherland Liberation War between 1950 and 1953 touched

## PROFILE

# Medicine is more of benevolent art than science

The 15th national workshop on experience of devoted health workers took place in Sinchon County, South Hwanghae Province, in November last year.

A doctor in her early thirties from the Hyongjesan District People's Hospital in Pyongyang, among other speakers, left a deep impression upon the participants.

Because it was almost impossible for anyone with clinical experience of only some ten years to make a presentation at the workshop, especially when they specialize in Koryo medicine.

However, Choe Yon Hui treated hundreds of patients with slipped disk, lumbosacral neuromyositis and sacroiliac joint dislocation and helped several paraplegics recover their mobility by means of Koryo therapies during 13 years of her medical career, which shows that she has considerable expertise in Koryo medicine.

Actually, Choe took a special liking for the traditional Korean medicine when she was a fourth-grader at college.

Having always aspired to be a doctor, she entered Sariwon Kang Kon College of Medical Sciences.

Once, a friend of hers got a swelling on the face and body with watery discharge running from sores. Choe tried to treat her with some medicines she could think of. However, they would not work but rather made the matters worse.

"At that time, our lecturer



“As an old saying goes, ‘Medicine is a benevolent art’. Only when doctors truly love people and are determined to save lives, can they make untiring efforts for the patients.”

Choe Yon Hui, doctor at the Hyongjesan District People's Hospital in Pyongyang

came and easily treated her with a few needles," she said, adding it looked like a charming magic to her.

Afterwards, she studied Koryo medicine with greater devotion.

As she delved into the world of Koryo medicine with determination, the teacher initiated her into the mystique of Koryo medicine.

After starting her career as a doctor in the Koryo internal medicine department of the Hyongjesan District People's Hospital, she honed her skills while treating paraplegic patients who were suffering from severe pains.

One of them earnestly asked her to relieve his acute pain, but his was a serious case with hypersensitivity reactions caused by drug-induced hepatitis and renal insufficiency.

She alleviated his pain by applying several Koryo therapies according to his biorhythms and enabled him to walk on his own in 65 days.

She also cured a woman, who became paraplegic before holding her baby in her arms after delivery due to postpartum diseases and slipped disk, in a little over 70 days.

"As an old saying goes, 'Medicine is a benevolent art'. Only when doctors truly love people and are determined to save lives, can they make untiring efforts for the patients," said Choe.

By Ri Sung Ik PT



Customers buy new literary books at the Sosong Bookshop in Pyongyang.

RYU KWANG HYOK



# Decent houses built to the delight of flood victims

Several regions in the DPRK suffered heavy damage from the flood and typhoon that hit the country one after another between August and early September.

Each time, the Workers' Party of Korea convened a meeting related to the reconstruction for recovery in no time and stressed the need to stabilize the life of residents by completing the reconstruction at the earliest possible date and make the rehabilitation campaign an occasion for providing local people with better living environment, not confining it to recovery from damage or the restoration of living conditions.

Supreme Leader Kim Jong Un

inspected different afflicted areas to familiarize himself with the damage in detail, dispatched strong construction forces and made sure that building materials, food including subsidiary foods, medicines and daily necessities for flood victims were supplied on a preferential basis.

True to the intention of the Supreme Leader, many builders from across the country including service personnel and combatants of elite divisions of Party members from the capital city rushed to reconstruction sites. Thanks to their 24-7 campaign, dwelling houses are springing up in succession in the areas that were ravaged by natural calamities.

The first happy event of moving into new homes unfolded in Kangbuk-ri of Kumchon County in North Hwanghae Province on September 17 and the afflicted people moved into new houses in Kaesong, the city along the Military Demarcation Line, and the western area of North and South Hwanghae provinces on the occasion of the 75th anniversary of the Workers' Party of Korea in October.

Over 820 new dwelling houses were built in Taechong-ri of Unpha County, North Hwanghae Province, in a little over two months.

New villages were set up on the east coast of Korea including Hongwon and

Riwon counties of South Hamgyong Province, Kim Chaek City in North Hamgyong Province, and the county town, 17 ri and workers' districts of Kimhwa County in Kangwon Province.

On the day of moving into new houses, locals danced merrily in every village and flood victims felt as if they were in a dream and shed tears of happiness as they stroked their doorplates, unable to readily cross the threshold of new homes.

Ri Un Sik, war veteran living in neighbourhood unit No. 85 of Kimhwa county town in Kangwon Province, and Kim Thae Su, another war veteran residing in neighbourhood unit No. 65, Unhak-dong No.

2 in Kaesong, said that as the saying goes, "Nothing is left after flood", but they received modern new houses without paying even a penny and such a world, in which disaster-stricken people receive blessings, rather than misfortune, is unthinkable apart from the Workers' Party.

Jang Ryong Hui, farmer of workteam No. 3 of the Kangbuk Cooperative Farm in Kumchon County, North Hwanghae Province, said that dozens of days since the disaster were the period in which the absolute trust in our Party has been kept more dearly, adding that they will repay the favour by producing more rice.

By Jong Hwa Sun PT



When many parts of the DPRK were afflicted by successive floods and typhoons in August and early September, soldiers of the Korean People's Army and members of the elite divisions of Party members from the capital city, among many other builders from across the country, waged a 24-7 campaign at the rehabilitation sites to bring back normalcy to the afflicted people. Locals are all smiles as they move into new homes in the stricken areas in North and South Hwanghae, North and South Hamgyong and Kangwon provinces.

## CHINA

# Importance attached to enhancing unity between army and people

Recently, the national commendation and naming conference for Shuangyong model provinces (counties) and Shuangyong model units and individuals took place in Beijing, China. (Shuangyong means the people supporting the army and giving preferential treatment to servicemen's families and the army defending the government and loving the people.)

General Secretary Xi Jinping met the participants in the conference and warmly congratulated those designated as national Shuangyong model provinces, counties and units and individuals before having a photograph taken with them.

A list of 411 model provinces (counties), units and individuals and a decision on conferring relevant commendations on

them were announced at the meeting.

The meeting was held in the way of telephone and video-conference with its main meeting hall set up in Beijing and branch meeting halls in each province, autonomous region and municipality.

With regard to the conference, newspaper *People's Daily* carried an article headlined "Striving to usher in a new aspect in the Shuangyong work in the new century" which called for implementing the party's political line successfully so as to defend the army, give preferential treatment to the families of servicemen, safeguard the government and love the people.

The meeting showed the Chinese party and government attach great importance to the

work of strengthening the army-people unity.

The Chinese party and government have made positive efforts to promote the unity, regarding it as an important matter for ensuring their remarkable political superiority and achieve the economic development of the country and overall social stability.

The plenary meeting of delegations of the Chinese People's Liberation Army and armed police units of the Third Session of the 13th National People's Congress of China in May emphasized the army-people unity as an important matter and put forward the orientation and ways to achieve it.

A variety of activities were conducted to strengthen the unity to mark the 93rd

anniversary of the founding of the Chinese People's Liberation Army on August 1 2020.

In particular, it marked an important occasion in boosting the unity that the army performed distinguished services in protecting the lives and property of people and promoting social stability and development in regions through those activities.

The Chinese party and government have made sure that central and state institutions and local party committees and governments at all levels support national defence and army building and relieve the mental sufferings and trouble of many officers and soldiers with warm affection of the people.

By Choe Yong Nam PT

## JAPAN

# Incumbent follows in predecessor's militaristic footsteps

After the recent launch of a relay satellite, Japanese Prime Minister Suga said that "the government will make the most of such information-gathering satellites as data relay satellite 1".

It is suggestive of the intention of the new Cabinet to keep spying on its neighbouring countries as its predecessor did.

Meanwhile, the defence ministry has built and launched an ultra-modern escort warship capable of performing anti-submarine, anti-aircraft, anti-warship and anti-mine combat missions in case of emergency, as well as patrol duty in peacetime.

It reportedly plans to build two such ships each year in the future.

These military moves are clear evidence showing that the country is giving further spurs to its bid for overseas invasion.

Japan claims that the buildup of its maritime force is aimed at containing China.

According to the 2020 defence white paper, China's warships, if small frigates are included, outnumber Maritime Self-Defence Force's escort ships.

However, experts say Japan's modernization of naval forces along with large-scale development and introduction

of military hardware capable of both attack and defence is just part of preparations for aggressive war, which is a violation of its constitution and international conventions.

The former chief of staff of the Ground Self-Defence Force already admitted that "it is beyond doubt that Japan is fully combat-ready" and *The Wall Street Journal* described the Japanese SDF as an army with the best war equipment in the world.

Naming a new escort ship after the light cruiser that belonged to the imperial Japanese navy is a typical example revealing the retaliatory ambition harboured

by the descendants of Samurais for reinvasion.

Censuring the current regime for following the militaristic policy of its predecessor, the majority of the Japanese people strongly demand that the "Suga Cabinet advocating the succession of Abe politics refrain from inheriting wrong things".

Japan's military moves getting more aggressive with the advent of the new regime are arousing wariness of the international community, its neighbouring countries in particular.

By Om Ryong PT

## FUEL

# Marine plants likely to be alternative biofuel material

Biofuel production is going on actively around the world as the energy shortage is getting more serious with the passage of time.

However, biofuel production using grains has not been welcomed so far as it aggravates the global food crisis.

But there has been a growing interest in fuel production relying on sea plants since its economic effectiveness was recently verified.

Such biofuels reportedly are

cleaner than other fuels and cause less pollution and their production costs far less than that of fuels made with grains.

A country is planning to cultivate sargassum in large quantities on a farm in order to make bio-ethanol with it. According to information available, the country is going to build the farm in the waters with a depth of about 400 metres and produce 6 500 tons of dried sargassum every year. Such an amount is said to be enough to manufacture 20 billion litres of

bio-ethanol.

Some other countries are engaged in research for making fuel with fine algae.

A country selected silicon and green algae with rich oil content out of 3 000 species of locally available fine algae, and the selected species are said to amount to more than 300. And the daily output of dried products of some fine algae is 50 grams per square metre and their oil content is 80 percent.

A research project is underway

to raise fast-growing fine algae with high oil content by adopting genetic engineering, along with a scheme to lower the cost of culture.

Researchers are paying attention to glasswort that is rich in vegetable oil as a source of biofuel which can be developed in a sustainable way with good prospects.

The plant grows well in salty tideland and its oil content is over two times higher than bean's.

As marine plants including glasswort can grow without special cultivation ground or clean water resources, experts see them as a promising major source of biofuel production.

By Song Jong Ho PT

## Briefly

## Laos

**45th founding anniv marked**  
Events took place in Vientiane on December 2 in celebration of the 45th anniversary of the Lao People's Democratic Republic.

Laotian President Bounnhang Vorachith attended a celebration held in the national assembly building together with senior Party and government officials.

That day, there were an artistic performance and photo exhibition, which showed the achievements made in nation building and national defence in the past 45 years.

## Palestine

**Prime Minister censures Israel's territorial seizure**

The Palestinian Prime Minister said in an official statement on December 2 that the Palestinian territory is decreasing due to Israel's continued expansion of settlements and that the acts of violence by Jewish settlers in the territory are getting rampant.

And he called on the international community to take stronger measures against the acts of Israel.

## WMO

**Concern over steady temperature rise**

The World Meteorological Organization said on December 2 that 2020 would be one of the hottest years ever since meteorological observation.

The recent ten years, six years since 2015 in particular, were the hottest period.

The mean temperature from January to October this year was 1.2 degrees centigrade higher than the one between 1850 and 1900.

## Sri Lanka

**Educational development plan unveiled**

The Sri Lankan government announced a plan which is aimed at improving the quality of secondary education until 2025.

It envisages the training of more than 47 000 competent teachers and the promotion of technical education to enable students to practically apply their knowledge in socio-economic activities.

## France

**Demos against job cuts, police outrages**

French people took to the streets in major cities on December 5 to protest against the authorities' attempts to axe a large number of jobs and protect police outrages.

More than 50 000 citizens joined the demonstrations and over 90 marches were reportedly held across the country that day.

THE PYONGYANG TIMES

## HERITAGE

# Relics shed new light on ancient Korean history

The DPRK archaeologists unearthed a large number of historical relics and sites this year.

Relics dating back to the primitive ages were discovered in a cave in Hyangmok-ri of Kangdong County, Pyongyang, in which the cultural layers of the Palaeolithic, Neolithic and Bronze ages formed one after another.

“The relics unearthed in Hyangmok-ri cave are of great significance in scientifically proving the fact that the Kangdong area in which Tangun, the founding father of the Korean nation, was buried, is the place where humans have lived for ages and that of the historical origin of modern Korean man,” said Ri Pin, researcher at the History Faculty of Kim Il Sung University.

When the primitive cave was discovered, its entrance was 2.7m wide and 1.5m high and an intensive excavation revealed a seven metres thick seven-layered sedimentary stratum.

The research group found out some 1 650 pieces of fossil mammals in nine kinds, 16 pieces of stone implements in eight kinds and over 280 pieces of fossil spores and pollens in the cultural layer dating back to the Old Stone Age (fourth and fifth layers), five teeth of an ancient type of Korean and 40 broken earthenware pieces in the cultural layer of the New Stone Age (sixth layer) and over a dozen broken earthenware pieces in the cultural layer of

the Bronze Age (seventh layer).

The electron paramagnetic resonance (EPR) and thermoluminescent datings were conducted to confirm that the relics discovered in the cultural layer of the Palaeolithic age date back to the latter period of the Old Stone Age, or 36 000-34 000 years back.

It was also found that the teeth of the old-type Korean discovered in the cultural layer of the New Stone Age were those of a woman in her fifties and the broken earthenware pieces in the cultural layers of the Neolithic and Bronze ages belong to the two ages through the study and analysis of their shapes, colours and patterns. The Hyangmok-ri cave relics were registered as those of national treasure value.

A stone Buddhist statue from the early period of Koryo was unearthed in Songhyon-ri of Onchon County, Nampho.

The white granite statue represents Buddha standing on a pedestal embossed with lotus flower designs. Discovered during its excavation were a broken roofing tile piece with fir-leaf pattern and other broken roofing tile pieces, a broken earthenware piece, iron arrowhead, metal coin and others.

Archaeologists explained that the Buddhist statue was made and erected in the early 10th century in the early period of Koryo on the basis of research and analysis of the posture of Buddha, a variety of features

of the stone statue and the time of use of the broken roofing tiles discovered during the excavation. The Songhyon-ri stone Buddhist statue was listed as a relic for preservation.

Koguryo tombs with murals and relics were newly unearthed in Wolji-ri, Anak County of South Hwanghae Province, and Ryonggang County of Nampho.

Seen on the four walls and ceiling of the first tomb in Wolji-ri were a picture of four guardians and some parts of paintings including those of constellations, patterns of lotus flower, cloud, lotus flower petal, bo tree, tortoise shell and others, which could not be seen in other Koguryo tombs with murals so far unearthed.

The main theme of the murals in the Koguryo tomb excavated in the Undok area of Ryonggang County was the picture of four guardians. During the excavation were found pieces of murals showing the head and foreleg of a tiger or a dog and the backside of the waist of a horse, those depicting the vine design along the corners of the ceiling of its coffin chamber and a coffin nail on the bier.

The DPRK Archaeology Society confirmed that the Koguryo tombs with murals unearthed in Wolji-ri was built in the first half of the sixth century and that in the Undok area of Ryonggang County in around the sixth century.

By Kwon Hyo Song PT



A stone Buddhist statue from the early period of Koryo discovered in Songhyon-ri of Onchon County, Nampho. Some of the relics from the Paleolithic, Neolithic and Bronze ages unearthed in Kangdong County, Pyongyang.



A Koguryo tomb with murals unearthed in the Ryonggang area in Nampho.

## Heritage elements under good protection

April and November are the spring and autumn national heritage protection months in the DPRK, when various activities are briskly conducted to protect cultural heritage elements.

This year, a great deal of effort has been invested into the protection and management of historical relics, scenic spots and natural monuments.

In Pyongyang, the Chilsong Gate, Sungnyong Hall and Chilsong Pavilion of the Pobun Hermitage were restored on the principle of adhering to historical facts.

South Phyongan Province repaired structures of Anju fortress, Tongamdong site and a tomb with murals in Phalchong-ri and refurbished the resting place at Anguk Temple.

In North Phyongan, South Hwanghae and South Hamgyong provinces, relevant workers raised the ground level at the Thongju fortress, Kojong Temple and the Jewol Pavilion and repainted them colourfully in a classical way. Other provinces also did up old fortresses.

In Kaesong which has many historical relics, they replaced the rafters of the gatehouse of the Ryusu government office and the extended caves of the

Myongryun Hall of Koryo Songgyungwan University and repaired the roof of the university's library so as to preserve national characters. They also laid stones and paved roads around the Mausoleum of King Wang Kon and Ryongthong Temple.

The Pulji Hermitage in Kungang County, Kangwon Province, and the Tacung Hall of Ryonghung Temple in Yonggwang County, South Hamgyong Province, were repaired and the tourist roads leading to them were maintained.

In Jagang Province, the Yongpha Pavilion in Huichon City and the Yongho Pavilion in Chosan County and other historical buildings were repainted while their roofs were tiled and surroundings cleared.

Meanwhile, much effort was directed toward protecting scenic spots and natural monuments.

Bridges, tourist roads and riversides were reconstructed and repaired at scenic spots and thousands of trees of good species were planted in natural monument reserves across the country to add beauty to the landscape.

By Ri Sung Ik PT

## Research findings to enrich national culture

This year, the Academy of Social Sciences has brought out notable research findings on the cultural heritage of the Korean nation.

It compiled several books including *Folk Stories of Korea* editing folk stories of the Korean people in the areas of Pyongyang, South and North Phyongan and South and North Hwanghae provinces and *Theory of Classic Writers* (Vols 1-8) which deals with the creative activities and characteristics of Korean writers in the period of ancient and medieval ages.

It also brought out essays contributing to sustaining the Pyongyang dialect and such books as *Korean Phraseology* and *Theory of Automatic Interpretation of Korean Sentences* which explain and prove the advantages of the Korean language.

“We have written dozens of essays by intensifying the discovery of folk data,” said Im Sung Jin, section chief of the Folklore Research Institute under the Academy of Social Sciences.

“Development of Koryo medicine and Korean people's long history of cultivating medicinal herbs”, “Good manners and customs seen through married life”, “Traditional makeup manners” and other papers demonstrate the customs and manners of the nation based on historical data.

“Riding history of Korea”, “Korean clothes forming harmony with beautiful colours and patterns”, “World-famous Korean silk” and other academic papers delineate national sports and amusements and national costumes.

In addition, “Special food of Phyongan province”, “Ogokpap (dish made with five grains) and nine kinds of dry edible greens”, “Traditional table manners of Korean nation” and some other papers on folklore traditions in the field of dietary life clearly prove that the Korean nation is a homogenous nation which has created and developed an independent culture on the same territory since long ago.

By Han Kwi Hun PT

