

# The Pyongyang Times

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## Chairman Kim Jong Un presides over meeting of Executive Policy Council of WPK Central Committee

Kim Jong Un, chairman of the Workers' Party of Korea, chairman of the State Affairs Commission of the DPRK and supreme commander of the armed forces of the DPRK, presided over the Fourth Meeting of the Executive Policy Council of the Seventh Central Committee of the WPK.

The meeting that was held at the office

building of the Party Central Committee on Wednesday was attended by Pak Pong Ju, Ri Pyong Chol, Ri Il Hwan, Choe Hwi, Kim Tok Hun, Pak Thae Song, Kim Yong Chol and Kim Hyong Jun, who are vice-chairmen of the WPK Central Committee and also members of its Executive Policy Council, and officials of major departments of the WPK Central Committee.

It examined and deliberated



matters relating to the internal work of the Party and approved their execution.

As he stated his conclusions on the matters discussed at the meeting, Supreme Leader Kim Jong Un called upon the members of the council to decisively improve the work of the sectors in their charge by displaying a high sense of responsibility and devotion, and organize and

over the issue of organizing a new department in the Party Central Committee and studied and discussed the ways to radically improve the personnel affairs system of the Party.

It also appraised the work of leading officials of major offices of the government and agreed on relevant measures.

Then the meeting studied a report on the anti-epidemic work and

situation in Kaesong City that has completely been sealed off under the top-grade national emergency system, discussed and decided on the Party Central Committee's special provision of food and financial aid for stabilizing the living of the citizens and instructed the relevant sector to take urgent measures to this end.

In addition, the Executive Policy Council discussed the practical

do every work in a revolutionary manner true to the ideas and as required by the policies of the Party Central Committee by maintaining the correct orientation of and pivot in their work for faithfully implementing the decision of the Party Central Committee and by making detailed arrangements for that.

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# Supreme Leader Kim Jong Un inspects flood-stricken area in North Hwanghae

Kim Jong Un, chairman of the Workers' Party of Korea, chairman of the State Affairs Commission of the DPRK and supreme commander of the armed forces of the DPRK, inspected the Taechong-ri area of Unpha County, North Hwanghae Province, which was hit by flood.

Due to consecutive days of torrential rain and rainstorm recently caused by the seasonal rainy front, the waterway levee gave way in the area of Taechong-ri of Unpha County, leaving more than 730 single-floor houses and 600-odd hectares of paddy fields inundated and 179 blocks of dwelling houses collapsed.

After hearing the report on the situation in the Taechong-ri area where lots of dwelling houses and a large area of arable land were submerged, the Supreme Leader went to the spot to learn about the actual conditions.

Saying he was really relieved to hear that there was no casualty as all the residents of Unpha County had been evacuated to safe areas in advance, he called on leading organs in the county including Party and government organs, working people's organizations and public security organs to responsibly conduct the work of putting up those who were left homeless at offices including those at the Party committee and people's committee of the county, public buildings and private houses, to stabilize their living and comfort them.

He ordered the relevant sector to submit a document on supplying every household in the afflicted area with the food grain reserve of the Chairman of the State Affairs Commission.

It is of primary importance to immediately supply the victims with bedding, daily necessities, medicines

and other necessities to stabilize their living as early as possible, he said, entrusting the task entirely to the departments of the Party Central Committee and the families of officials at its headquarters.

He gave an instruction to organize the rehabilitation headquarters with cadres of the relevant departments of the Party Central Committee and the Ministry of the People's Armed Forces and to get the headquarters to size up the damage on the spot first to correctly calculate the materials and forces needed for the rehabilitation before reporting to him.

A central design force should be dispatched to draw up a detailed plan for building houses for 800 families in the farm village of Unpha County hit by flood as a model and complete the project at the highest level and at an earliest date possible, he instructed.

Saying he decided to mobilize the army for this rehabilitation, too, he ordered the Korean People's Army to form a necessary force and urgently deploy it and to give precedence to the arrangement of the wrecked houses, roads and zones together with the county people.

Pointing to the importance of taking measures to supply such construction materials as cement needed for the rehabilitation, he gave an instruction to use the strategic reserves of the Chairman of the State Affairs Commission according to the calculated amount.

He appealed to the Cabinet, the State Planning Commission, ministries and national agencies to actively cooperate in the rehabilitation of flood-hit Unpha County, well aware of the Party's intention.

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GUIDE TO VICTORY AND GLORY

## In order to build foundations for a self-sufficient economy

The DPRK has been pushing ahead with socialist economic construction for several decades under the unfurled banner of self-reliance.

This is unthinkable apart from the foundations of the self-supporting national economy laid under the guidance of the Workers' Party of Korea.

At the time of Korea's liberation in August 1945, the national economy was very backward and lopsided due to the cruel colonial predatory policy of the Japanese imperialists, which lasted for over 40 years.

Therefore, the WPK set forth the line of economic construction on laying the independent foundations for the development of the national economy.

The line of independent national economic construction to build an economy which is self-reliant and self-supporting and serves the people was the development of the programme on economic construction, which was outlined by President Kim Il Sung in the Ten-Point Programme of the Association for the Restoration of the Fatherland during the anti-Japanese armed struggle,

in keeping with the historical conditions after the country's liberation.

Under the guidance of the WPK, the Korean people rehabilitated and bolstered the ruined economy in a short span of time despite Japan's bluff that it could never be restored by the Koreans' effort.

The Sixth Plenary Meeting of the WPK Central Committee held on August 5 1953 just after the DPRK's victory in the Fatherland Liberation War put forward the basic line of economic construction in the post-war period on developing light industry and agriculture simultaneously while ensuring prioritized restoration and development of heavy industry.

It was an original line of economic construction which should be adhered to not only in the restoration and development of the national economy in the post-war period but also in the whole course of socialist construction.

Although the enemies blustered the Koreans would be unable to rise up again in a hundred years, they followed the line to clear away the rubble of war in a few years and make a big stride towards socialism.

The WPK in the December 1956 plenary meeting advanced the policy of bringing about a new upsurge in socialist economic construction and roused all the people to accomplishing the First Five-Year Plan.

The workers of the then Kangson Steel Works produced 120 000 tons of billets by means of a blooming mill with a rated annual capacity of only 60 000 tons and kindled the first torch of the Chollima movement and those of the then Kim Chaek Iron Works 270 000 tons of pig iron with the 190 000 ton-capacity blast furnace, while those at the Hwanghae Iron Works erected a large blast furnace in less than a year.

With the completion of the five-year plan, the DPRK put an end to the colonial lopsidedness of industry and became a developed socialist industrial-agricultural state with firm foundations of the independent national economy.

With the basis for socialist industrialization provided, the WPK put forward the programme of the First Seven-Year Plan for scaling the high peak of socialism in its Fourth Congress in September 1961.

Thanks to the Party's creation of a new economic management system based on the revolutionary mass line and guidance over the struggle for attaining the six goals of grain, textile, steel and coal production, housing construction and fishing, the major thrust sectors of the seven-year plan, the DPRK successfully carried out the plan and became a socialist industrial state.

Consequently, the DPRK completed the task of socialist industrialization in a matter of 14 years between 1957 and 1970.

Since then, several rounds of long-term plans were implemented to consolidate the foundations of the independent economy.

Therefore, even when the world suffered severe economic distress in the 1970s and 1980s due to food and resource crises, the DPRK's economy continued to develop in a stable manner.

During the Arduous March and forced march in the 1990s, it developed CNC technology and launched its first artificial satellite Kwangmyongsong 1 with its own effort, technology and resources.

It is the unshakeable faith of the WPK to further build up the might of the independent national economy and demonstrate the spirit of socialist Korea.

At present, much effort is directed to the work to open up excellent prospects for socialist construction by expanding and enhancing the country's capacity for independent development in different sectors of the national economy.

The metallurgical and chemical industries are holding up higher the banner of Juche orientation. The nation's effort for boosting power generation capacity gets remarkably stepped up and increasing numbers of farms and farmers reap good harvests even under unfavourable climate conditions.

As long as there is the guidance of the WPK which regards the construction of the independent national economy as the lifeline of the country and nation and a firm guarantee for development and prosperity, the building of a powerful socialist country is sure to be accomplished in the DPRK.

By Pak Song Min PT

## FISHERY

# Proactive efforts channelled into fish farming, offshore culture

## To improve efficiency of cage-net fish farming

The Taedonggang District Cage-Net Fish Farm in Pyongyang has been increasing fish output of late by improving the methods of fish farming.

"We are increasing productivity by effectively calculating the depth of relevant water areas, the vertical distribution of plankton and the characteristics of the area with good sunshine conditions," said Kim Hyon Chol, manager of the fish farm.

The farm pays special attention to increasing the proportion of natural feed.

To this end, it constantly moves its cage-nets to the place with favourable feed conditions and produces floating feed from fish meal, domestic animal bones and other by-

products. It has newly built a breeding ground for earthworm and water fleas to get protein-rich feed.

The increase in the proportion of natural feed has facilitated the supply of feed and doubled the fattening rate of fishes.

According to employee Choe Tong Chol, the farm secures natural feed for more than 15 days ahead and uses a quick-freezer to prevent them from decaying.

The farm also applies different fish farming methods that suit seasonal conditions.

In order to reduce the damage by muddy water in the rainy season, it uses a water quality measuring device to lay nets at a depth of 1-1.5 metres, unlike at normal times. It also sterilizes fishes with

weak salt water when the river water gets clear in order to prevent the outbreak of diseases.

It increases the fattening rate of fishes by grading them by sizes.

Even the fries spawned in the same period differ in the speed of growth and consequently in their size with the passage of time, which makes it impossible to increase their weight increment rate at the same time. To prevent this, the fish farm timely classifies them by size to grow them in suitable cage-nets.

"We intend to breed seed fishes in the near future to secure fries by ourselves," said Kim Sung Chol, a staffer in charge of production.

By Kim Il Jin PT



A mobile cage-net fish farm built on the Taedong River in Pyongyang.

PAK KWANG HUN

## Mixed culture brings big profits

The Riwon Fishery Station in South Hamgyong Province does mixed offshore culture well.

"Our station, which is located on Riwon bay with gentle waves and good quality water, encourages mixed culture. Doing offshore farming well brings more profits than mining gold," said the manager of the station.

According to him, the station grows kelp and mussels together on the farm covering an area of over 10 hectares.

Generally, kelp absorbs carbon dioxide and releases oxygen by means of photosynthesis. And mussels absorb oxygen and give out carbon dioxide. Such characters provide favourable conditions for their growth.

The station cultivates the seaweed and shellfish at the upper layer of the farm and trepangs on the seabed.

"When they are raised together, kelp, mussels and trepangs grow fast as they have good effects on each other and it is very profitable as it enables us to utilize the sea in a three-dimensional way," said the manager.

According to him, the productivity of marine products has increased over 1.5 times since the station started mixed farming.

The station raises hundreds of thousands of trepang fries every year and releases them in

the farm. It also breeds scallops, and stocked the farm with at least a million young flatfish in February this year.

"As we have introduced advanced breeding methods, we have become famous as a unit good at offshore farming," said Pak Song Sang, manager of the farming fishery workshop.

At the outset of mixed farming, the station had not enough technical personnel and therefore it had much trouble even for small technical problems arising in realizing mixed farming, including the artificial culture of trepang.

Therefore, the station buckled down to building up the farming fishery workshop.

It paid primary attention to finding out and training technicians and actively diffused advanced farming techniques.

As it does offshore farming, the station positively introduces new techniques into processing marine products.

For example, it set up a powdered kelp production line to produce health food, which wins growing popularity from consumers.

"We are now working to put the breeding method of sea urchin that grows in the shallow sea on a scientific basis to suit its features," said the workshop manager.

By Chae Hyang Ok PT

## Fishery station grows swellfish of good breeds

The Taegyong Fishery Station raises swellfishes of good breeds.

"We have been intensifying research into swellfish farming for more than ten years," said manager Pak Sung Il.

According to Jang In Ho, chief of the breeding department, the station has directed efforts to stocking the rivers and the sea with *Figu obscurus* and black swellfish since last year while preserving their pure breeds.

In the past, swellfish easily got ill as the scaleless fish was very sensitive to water quality.

Therefore, the station concentrated efforts on taking care of the fry of swellfish.

It deepened research for adapting *Figu obscurus* to freshwater by

taking advantage of its capability to lay eggs in the water with the salinity of at least 3-5 percent.

In the course of this, it established a rational spawning technology based on artificial insemination so as to raise the spawning survival rate in freshwater to 90 percent.

It solved the problem of feed for fry of swellfish by culturing their early feed.

It built a new water filter pack to grow chlorella, brine shrimp and water flea, thus easing the shortage of protein feed.

It also bred a hardy breed by cross-breeding *Figu obscurus* with black swellfish.

The swellfish of a new breed is voracious and highly resistant to diseases and, consequently, very

viable.

Technical instructor Kim Chol Ryong said that the station stocked the Taedong River with over 100 000 fry of *Figu obscurus* adapted to freshwater early last June and released another 100 000 fry of black swellfish into the West Sea of Korea early in July.

Besides, it worked out methods of breeding Chongchongang sweetfish, which is known to live only in clear water, in the lower reaches of the Taedong River and in ponds and cage-nets.

The station also adopted mixing culture in several layers in the breeding ground.

By Sin Pyol PT

## North Hamgyong expands kelp farms

Fishery and culture stations in North Hamgyong Province have channelled efforts into kelp growing after expanding the farming area.

The Chongjin Fishery Station built kelp farms in a planned way, based on a detailed survey and analysis of seawater temperature, salinity and others, and increased the per-hectare yield.

The Kim Chaek Fishery Station built a water-circulating culture ground to produce kelp seedlings and sow the seeds in a scientific way and expanded the farming area to boost

productivity.

The Kanhae Stocking Fishery Station repaired and maintained ships by keeping pace with production to transport kelp in time.

Many fishery and culture stations including the Sokho Offshore Culture Station and Chongam fishery station for the supply of feed for sea salmon rationally arranged the rope frames for fixed nets and the guide lines for setting out rows of seedlings and carried out the thinning of kelp properly to increase the per-hectare yield.

RODONG SINMUN

## STONEMWORK

# Technical innovation leads to quality improvement

The Taedonggang Stone Processing Company situated in a suburb of Pyongyang solves all problems arising in production and business activities by dint of technical innovation.

Its technicians overhauled such major equipment as an oxygen-hydrogen generator, 20 m<sup>3</sup> compressor, crusher and 15-ton tower crane by resolving the problems relating to piston coupling rod, bearing, welding rod and other fittings and materials.

They also refashioned the previously used welder into current stabilization one to save much electricity and resolved the electricity problem using solar energy.

“Our company efficiently runs the sci-tech learning space and everyone is encouraged to monthly come up with more than one invention or original plan needed for production and business activities. In the course of this, we have introduced various rationalization proposals into stone processing and production and saved a great deal of labour,” said senior engineer So Sang Chol.



Officials discuss ways to improve the quality of products at the Taedonggang Stone Processing Company.

The employees devised and manufactured an engraving machine, round column-processing machine and comprehensive stone saw control panel.

Such processed stone goods as round columns, rails and slabs with decorative patterns are popular with users for their good shape and quality, said So.

The process for producing an acrylic coating material for exterior with the sediments,

which were discarded previously, was also devised by a technician of the company and the environment-friendly product won the national exhibition of scientific and technological achievements in the field of furniture and building materials held in 2019.

“We are redoubling efforts to constantly increase the variety of goods and raise their quality,” said Manager Rim Se Ho.

By Yun Kyong II PT

## BUILDING MATERIALS

## Production bases updated

South Phyongan Province is now pressing on with the projects for the reconstruction and modernization of building materials production bases.

The Puhung Cement Factory has undertaken a capacity expansion project. After raising the scientific level of various production processes a step higher, it is now pushing ahead with the preparations for the introduction of an automatic control system and supply of materials simultaneously.

The Songsan Cement Factory expanded the materials transport system and finished the repair of

the raw material drying furnace and reconstruction of cement crusher No. 1, thereby laying the groundwork for producing more cement.

The Anju Sanitary Ware Factory made and installed two kilns after finishing the remodelling of the transformer to build up its production capacity. It has also made notable achievements in model making for the production of various kinds of sanitary ware.

A variety of projects have been completed at the Kaechon Tile Factory, including the general overhaul of the primary

kiln and the construction of ultrafine crushing ground and bar moulding ground. The factory is now stepping up the construction of the secondary kiln and outdoor drying place.

The Phyongsong gravels and sand production company is pushing forward with the construction of a batcher plant and cement silo, while carrying on technical reconstruction.

Technical reconstruction projects are also under way at the Tokchon Cement Factory, Sunchon Building Materials Factory and Sunchon Metal Rolling Factory and the construction of the Phyongsong Building Materials Factory is nearing completion.

RODONG SINMUN

## WHEAT

## Food production cycle pays off

According to KCNA, the cooperative farm of Hongwon County town in South Hamgyong Province has applied food production cycle to reap a good harvest in the farming of wheat which was planted as an earlier crop this year.

The farm paid great efforts to livestock farming and used manure from it to improve soil fertility.

It introduced a technology of treating chicken excrement with bacteria before feeding it to

pigs. It also added the remnants from fermented methane gas containing lots of nutritive elements to *Pispea spreopiopes* to increase the output of animal feed.

By dint of a food production cycle combining stockbreeding base, methane gas production process and *Pispea spreopiopes* cultivation ground, it produced meat and eggs in large quantities this year and spread over 40 tons of quality organic fertilizers

over wheat fields per hectare.

Meanwhile, it selected and planted a superior wheat species that suits the specific conditions of the area.

It applied base manure in a scientific way and promoted the initial growth of wheat to the maximum to ensure its wintering rate by over 95 percent.

After providing favourable conditions for the latter period of growth of wheat by sufficiently applying necessary fertilizers to fields in spring, the farm applied foliage dressing on several occasions together with seawater, thus increasing the weight per 1 000 grains and ripening rate of wheat.

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## FURNITURE

# Factory manufactures furniture in keeping with trend

The Taedonggang Furniture Factory produces light knockdown furniture.

“The world’s trend of furniture development is to design neat and light furniture,” said Manager Hong Myong Chol.

The factory keeps abreast of the demands and taste of consumers by means of its furniture exhibition hall and gives precedence to designing furniture incorporating their demands.

“We direct all furniture designs to boosting efficiency while using less wood,” said Jo Kum Chol, chief of the technical arrangement room.

In this course, they came up with many designs for furniture. Especially, the factory mostly designs the furniture using the cross cores made of scrap wood.

The factory is equipped with a CNC wood carving machine, automatic finger jointing production line, vacuum curved plywood press and other furniture-making facilities and standardizes its products.

“The automatic finger jointing production line is effective in sticking various waste wood pieces to make materials of any size and they are very solid,”

said senior engineer Ri Song Ui.

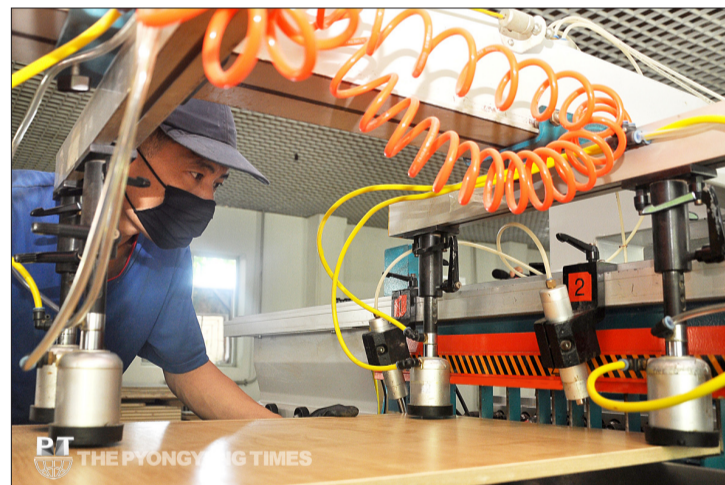
The factory also produces decorative plywood, which was imported in the past, and has introduced various coating methods for preventing bleaching while using less materials, thereby enhancing the texture of products.

The furniture and fittings produced thus are popular with users as they preserve natural beauty and are light, solid and original in style.

The factory turns out over 130 kinds of furniture. In recent years, it produced over 13 000 pieces of furniture and fittings in dozens of kinds to provide them to newly built or reconstructed major structures including the Korean Revolution Museum, the Sci-Tech Complex, Mirae Scientists Street and the Pyongyang Catfish Farm.

At present the factory is working to increase the proportion of domestic production of raw and other materials as it manufactures a glass processing machine, builds a high-frequency vacuum drying oven and sets up a chipboard production process.

By Jong Hwa Sun PT



A worker monitors a machine at the Taedonggang Furniture Factory.

## GOODS

## Production of consumer goods up

Kangwon Province increased the production of the August 3 consumer goods 1.2 times.

The production of the August 3 consumer goods is a movement to turn out a variety of daily necessities by effectively tapping reserves and potentials without huge investment of the state and arousing the creative initiative of the masses to the maximum.

Wonsan and Munchon recycled by-products and waste from the production processes of locally-run factories to remarkably increase the production of such consumer goods as washing soap and underwear, thereby carrying out their first half-yearly quotas at

over 120 percent.

Kosong and Thongchon counties brought out hat, fruit tray and screen made of bamboo and shell, local specialties.

The Munphyong Smeltery and the Wonsan Leather Shoes Factory produce various products including flowerpot and cushion in a distinctive way by tapping latent reserves.

The demand for daily necessities and products that suit the juvenile mind from the Wonsan spinning factory, Wonsan Furniture Factory and others is growing more for their smartness and convenience.

KCNA

## EDUCATION

# Online education helps many to settle bottlenecks

Online education gets brisk at the Grand People's Study House and the Sci-Tech Complex in Pyongyang.

According to Kim Chol Man, senior staffer at the Grand People's Study House in charge of online education, the study house has developed into a hub for making the whole society intellectual and a correspondence university of working people since it was inaugurated in 1982 under the instruction of President Kim Il Sung. Even foreigners admired it as a "patent" of President Kim Il Sung, he added.

Today, its social education form has converted into online education as required by the developing times to be in wide use.

The online education courses at the Grand People's Study House and the Sci-Tech Complex deal with the problems badly needed in practice and everyone can join it, irrespective of their occupations and ages.

Their education is given, divided into real-time online lecture and online in-service training course.

Ri Jong Min, deputy workshop manager of the Songyo Knitwear Factory, said that the online education of the study house and sci-tech complex is very helpful

for work and life, adding it is particularly essential to those who have not received technical education from universities or colleges.

The real-time education covers many problems including the latest development trend in relevant fields and the basic scientific knowledge related to the major fields of study.

According to Kim Chol Man, lecturers learn about sci-tech bottlenecks in production sites in order to bring the content of lectures close to reality and select the point in question to be dealt with in lectures.

Lecturer Mun Kwang Chol noted that reality is a good school,

saying they learn a lot in reality while engaging in education.

The online in-service training course also wins popularity among locals.

Kim Jong Chol, researcher at the academy of railways, said that the selective online in-service training course is very effective as even a major field of study is subdivided to solve knotty problems in a short time.

After finishing a month-long course with the main focus put on the point at issue in reality, the trainees present essays and many of them are introduced into production sites.

By Ri Sung Ik PT



A lecturer gives online lecture at the Grand People's Study House in Pyongyang.

## PROFILE

# Metal powder injection-moulding technique introduced

The metal powder injection-moulding technique has been introduced to raise and increase the quality and quantity of products in the DPRK.

It is a technique to mass-produce at lower costs the goods that are small in size and complex in shape.

Kim Jong Gon (pictured), PhD and director of the composite material research institute of the material science and technology faculty at Kim Chaek University of Technology, was instrumental in introducing the technique.

His development is said to be on the world level.

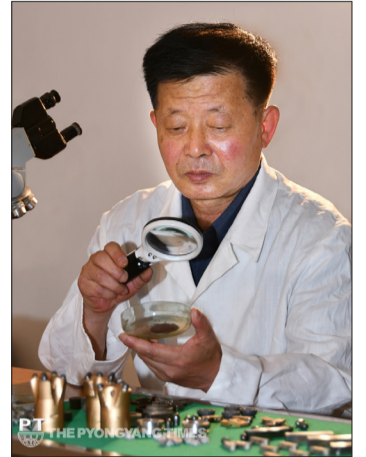
Over ten years ago, the powder material department was assigned the task of establishing a metal powder injection-moulding process at a factory.

Kim Jong Gon was head of the department and was unfamiliar with that field at the time.

But he buckled down to it with other lecturers of his department.

They established a powder goods production line consisting of a metal powder production process based on gas spraying, hot-mix, injection-moulding, etc. and developed a technique for producing goods.

Those who have introduced



the technique say that its introduction has enabled them to radically boost the output of small products with complex shape and reduce their per-unit cost to one third as compared to previously.

Kim also developed the lever of the assembling tool of CNC lathe, which was imported previously, and new materials using the metal powder injection-moulding technique for the first time in the country.

In addition, he developed a rare earth permanent magnet and succeeded in other important research projects.

The 64-year-old director also directed big efforts into the education of young scientists, thereby training several PhDs.

By Ri Sang Il PT

## COUNTY

# Attaching importance to training talents

"Our county has powerful forces of talents in such fields as IT, electronics, mechanical engineering and chemistry. They play a pivotal role in solving scientific and technological problems for its growth," said Myong Sang Il, chairman of the Taegwan County Committee of Science and Technology in North Phyongan Province.

According to him, the technical forces of the county have achieved a great deal of successes in research including the projects for the production of coating materials for exterior with natural stones, the establishment of an integrated control system for the county forestry management station and the designing and manufacture of a mini mobile corn thresher.

In particular, the automatic sunlight following device they developed is very efficient as solar panels turn following the sun and returns to its original position after sunset.

The county inspires technicians at industrial establishments to solve sci-tech problems facing the county.

Once a factory technician developed a portable welder of a new type. It won popularity with users as it was handy, original in idea and highly useful.

He was later promoted to the county sci-tech committee, before playing a crucial role in the establishment of the integrated control system at factories in the county.

"I was only content with making the mobile welder in the factory. But after I began to work at the county sci-tech committee, I came to set myself higher goals and achieved good research results. I am determined to do more things for our county by devoting all my knowledge," said researcher Pak Ho Song.

The committee also pays close attention to the living of researchers.

A technician who graduated from a factory college knew several foreign languages, had a profound understanding of chemistry and could develop 3D designs. Unfortunately, however, he was injured in an accident.

The county took fraternal care

## SOFTWARE

# New programs prove effective in teaching students

Newly-developed education support programs are very popular with students and lecturers.

The English study support program for senior middle school students is based on English textbooks between the first- and third-year classes. It has various functions for reading based on speech recognition technology, listening according to standard recorded materials, conversation using the VR (virtual reality) technology, diverse forms of vocabulary study through pictures and audio materials, and English word

of him to restore him to health and, even after his recovery, helped him in every way so that he could work free from any inconvenience.

Scientists, researchers and technicians in the county regard scientific research and technical innovation as a patriotic undertaking that requires devotion for their county as well as their professional duty.

By Kwon Hyo Song PT

and sentence dictation based on standard recorded materials.

"Students' command of English has markedly increased since the introduction of the English study support program," said Ri Hyang Sim, teacher of Kim Chang Bok Senior Middle School.

The AR (augmented reality) support program is a teaching aid display program capable of creating and controlling virtual 3D models in reality on the basis of shape recognition technology.

The program includes more than 130 3D space graphics to be dealt with in the first- and second-year senior math classes, 3D animal data for kindergarten children and primary school pupils and many other 3D models.

It also helps display and control teaching aids without using sensors and download and use any 3D models built by users.

"The cognitive efficiency of space graphics has improved further as compared to previously among students since

teachers applied the program to education," said Kim Hyok, section chief of the Chongnyu economic technology company.

The real-time image synthesis program helps increase the efficiency of recognition using VR technology.

It is designed to synthesize with 3D media by adding several functions to the previous program which could synthesize only videos and pictures and to create the vivid VR environment by using the video colour erasing function.

It is favoured by many teachers as it is effective in synthesizing the background scene with persons in real-time basis while controlling on screen the virtual environment created with the help of various tools.

Besides, new versions of math and Korean language study support programs, whose pedagogical efficiency and practicality have further been improved and favoured by all primary schoolchildren, have also been brought out.

By Kil Chung Il PT

## VIRTUE

## An altruistic couple

“Sin Chol Su and his wife Yun Yong Sun could lead an easy life as they receive preferential treatment socially since Sin is an honoured disabled soldier. But they have voluntarily been doing good things for society and the collective,” said Kim Yong Ae, a neighbour of the couple living in Jungsan County town, South Phyongan Province.

Sin’s couple grow over 80 fruit trees including chestnut, apricot, persimmon, apple and jujube.

Asked about his motivation for doing such good things in bad health, Sin said: “I just want to repay the favour even a bit to our generous socialist system which gives prominence to and values honoured disabled

soldiers like me and my neighbours who take warm care of me.”

He added that his family has been able to do something for the good of society thanks to his wife who does every household chore while going to work, regarding that as her bounden duty.

Over twenty years ago, Sin returned home after being demobbed as an honoured disabled soldier. He got married to Yun Yong Sun, a kind-hearted employee of the county post office who had frequented his home to take care of his health and life.

“After marriage my husband often said we owed a great deal to the country which values and gives prominence to honoured

disabled soldiers, as well as our neighbours who pay attention to our living lest we should have any inconvenience. So we planted fruit trees around our house,” recalled Yun.

Several years later the trees bore fruits and the couple sent them all to villagers, children at the kindergarten and nursery and builders at construction sites.

They said they take delight and feel the value of life in seeing them taking their fruits with relish and gratitude.

“It was not easy to take care of my disabled husband and do housekeeping while staying on my job. Especially, I thought I would be unable to manage it when my husband had to have his leg amputated as his illness got serious. At that time, my husband said that he could not live only enjoying preferential treatment as a disabled soldier and that we would be able to do good things for society even in a minor way if we pooled our efforts,” said Yun.

The couple continue to do good things at present.

They sent relief materials to the flood victims in the northern areas of North Hamgyong Province some years ago and have taken warm care of an old war veteran without children since last year.



Honoured disabled soldier Sin Chol Su (left) and his family members refresh their fond memories seeing photos.

KIM YONG CHAN

By Kwon Hyo Song PT

## WBW

## Breastfeeding encouraged among nursing mothers

“Breastfeeding is enough for the children to replenish nutrients and protect their lives,” said Yu Hyang Suk, section chief of the Pyongyang Maternity Hospital.

The DPRK widely encourages breastfeeding among the women with newborn babies in recognition of the importance of mothers’ milk in reducing infant morbidity and mortality.

Yu Hyang Suk said that any milk products cannot substitute for mothers’ milk, the only life-giving water and the most ideal foodstuff for newborn babies, as it contains sufficient physiological activators and immune substances that promote brain development and protect digestive organs. She added that it has scientifically been confirmed that mothers’ milk is best for the psychological and mental growth of the newborn.

The Pyongyang Maternity Hospital and such hospital in each province conduct information activities among pregnant women and nursing mothers to raise their awareness of the breastfeeding-based nutrition in the first 1 000 days after birth and initiate the first

breastfeeding within an hour after delivery.

In particular, they demand nursing mothers give colostrum coming within a few days after delivery to the newborn as it is as good as a preventive injection for them and the immune substances in the colostrum help protect the babies from different infections.

They also ensure that the management of nutrition of newborn babies is only performed with mothers’ milk for six months after their birth.

Medical workers, who are engaged in the care of mothers and babies, and those in charge of hygienic information and in relevant sectors conduct brisk information activities about the 10 major stages for breastfeeding with a correct understanding of technical knowledge of breastfeeding.

Such mass magazines as “Breastfeeding and supplementary foods” and “Why breastfeeding is needed and how to breastfeed?” are popular with pregnant women and nursing mothers.

The World Health Organization

has set a week of August as the World Breastfeeding Week and recommended encouraging breastfeeding in society.

By Pang Un Ju PT

## IVF

## A step forward in research into IVF-embryo transfer



CHAE MYONG RIM

Researchers work on an operation for IVF at the Pyongyang Maternity Hospital.

Researchers of the Pyongyang Maternity Hospital have succeeded in putting each process of IVF (in vitro fertilization)-embryo transfer on a scientific basis in line with reality.

“We succeeded in IVF-embryo transfer long ago. But we had to solve lots of problems in order to solidify it in keeping with our actual conditions.

“It took over 10 years to put all processes for IVF on a scientific basis,” said Hong Kyong Sun, head of the infertility treatment lab of the Pyongyang Maternity Hospital.

IVF-embryo transfer is the core technology for the treatment of infertility.

According to Hong, this technology was not easy to put it on a scientific basis.

The technology which can realize the desire of infertile women to have babies belongs to the cross-disciplinary science combining gynaecology, endocrinology, embryology, bioengineering and other studies and forms a single integrated technical process consisting of not only simple operating technique but different stages of techniques.

This difficult technology requires following seven treatment steps from the selection of object of its application to maintenance after embryo transfer and establishing test and treatment methods according to the physiological cycle at each step.

A research team of the hospital put on a scientific basis the treatment methods including the test and measurement, medication and intervention at every step for introducing the technology in accordance with the constitution, physiological characteristics and age of patients.

And they made it possible to domestically prepare and use the culture fluid needed for the application of the technology.

“The IVF-embryo transfer is an expensive treatment method in the world. But the patients are treated free in our country,” said Hong.

The Korean researchers are now working to boost the effectiveness of the technology which has attained the world level in the success rate.

By Kim Rye Yong PT

## CATERING

## Shaved ice stalls wow citizens as mercury climbs

Shaved ice stalls are the most crowded places in Pyongyang nowadays when the hot temperature of around 30°C is measured continuously.

Pedestrians stop at the shaved ice stalls furnished with a neat table and chairs and cool themselves for a while in shaded, breezing places as they have a talk eating different kinds of shaved ice.

All of them unanimously say that they cool off in an instant when they have cold and sweet shaved ice.

People ask for different kinds of shaved ice.

However, most of them prefer

sourish and sweet strawberry and combined fruit shaved ice.

The strawberry shaved ice is served by putting strawberry jam, condensed milk, ice cream and syrup on the crisply-cut ice, while the combined fruit shaved ice is made by mixing strawberry, watermelon, melon, apple and blueberry juices with condensed milk. They are the favourite choice of women and children.

There are also glutinous rice-cake and peanut shaved ice.

The peanut shaved ice has unique flavour with the combination of the taste of chewing the peanut in the ice

and the cold taste of ice.

Ri Yong Ae, a saleswoman at the shaved ice stall on Mirae Scientists Street, said that many people come to her stall when temperature rises, but she can satisfy the visitors though their demands are different.

“My son prefer shaved ice to ice cream or ice-lolly, so I often buy him combined fruit shaved ice on my way home from work,” said a woman.

People say that the shaved ice relieves their thirst more than ice cream or ice-lolly as it leaves a pleasant aftertaste.

By Ri Myong Jun PT

## WARMING

# World keeps warming causing harmful insects to thrive

Recently, the damage caused by harmful insects is getting more serious in different parts of the world.

Experts attribute it to climate change.

According to their opinion, global warming makes harmful insects multiply, become voracious and change the mode of locomotion.

Finally, it will pose great threat to the global crop yields.

It is said that if temperature rises by 2°C, wheat, rice and maize yields may decrease by 46, 19 and 31 percent respectively due to the damage by harmful insects.

A typical example is the damage by desert locust clouds. The prevalence of desert

locust clouds in dozens of African and Asian countries for several months this year did heavy damage to farm produce.

An economist of the World Food Programme said that the threat of desert locust clouds is more serious than COVID-19 in East Africa.

Shortly ago, a high-ranking UN official said that the extent of damage by desert locusts is unprecedentedly big and climate change is the main factor which worsened the damage.

Experts asserted that though East Africa is a dry region, it rained heavily in 2019, affected by a tropical cyclone which occurred in the hot waters of the Indian Ocean, and thus suffered enormous damage by desert

locusts.

Some Asian countries are also suffering heavily from the harmful insects which could not be seen in the past.

Moths living on crops are now spreading in Asian countries.

This harmful insect whose home is the tropical and subtropical region of America multiplies when temperature rises.

It spread to Asian countries including India, Sri Lanka and Vietnam in 2018.

According to information, corn and sugar cane yields decreased by 20-30 percent due to the effect of moths in some parts of Asia and Africa. Worse still, some areas reportedly harvested nothing, except empty

heads of grain.

European grain producers are estimated to sustain over 75 percent of grain loss due to the damage by harmful insects multiplying due to climate change.

Many countries direct much effort to the prevention of damage by harmful insects while tightening the monitoring of them, strengthening an early warning system and informing people of their dangerousness and their extermination method.

The ever-growing damage by harmful insects clearly shows the urgency of settling the issue of global warming.

By Om Ryong PT

## JAPAN

## Smoke and mirrors

Japan is stepping up the bid to upgrade the Self-Defence Forces and put it on a real war format.

It is trying to dispatch the SDF to the RIMPAC military exercise which is slated to take place from the middle to the end of August.

Defence Minister Kono, at the press conference held after a cabinet ministers' meeting on July 14, said that the Aegis warship and helicopter carrying escort ship of the Maritime SDF would take part in the exercise and the drill is aimed at coping with enemy warships, submarines and aircraft.

The SDF which recently possessed two Osprey transport planes is also going to increase the number of the aircraft to 17 in five years.

What is more serious is that the government is examining an alternative to Aegis Ashore.

At the recent session of the diplomacy and defence committee of the House of Councillors, Kono said that they have all options on the table concerning the examination of a new missile defence system and do not exclude the possibility of possession of the ability to attack enemy bases.

The public is of the opinion that Japan's missile defence means the attack on the enemy base geared to striking its missile launch site before any fire and such an attack is fraught with the serious danger of preemptive strike.

Not only analysts but also Japanese politicians say the remark will trigger a backlash from the neighbouring countries as they express the fear that it might accelerate an arms race in East Asia and aggravate its security environment.

The Japanese government is trying hard to weaken the growing opposition at home and

abroad as it talks about "self-defensive counterattack ability" and "proactive self-defence capacity", but it cannot cover up its true intention.

Japan's military buildup beyond the confines of exclusive defence is arousing the wariness of the neighbouring countries and the international community.

By Song Jong Ho PT

## WOMEN

## Global efforts made to support and empower women

Violation of women's rights is still rife around the world. According to the United Nations and other international organizations, the majority of victims of sexual assaults and human trafficking are women and girls, and the women under 20 who are infected with HIV number 970 000 at present. And women have much less opportunity to acquire basic digital technology than men and 12 million girls are forced into early marriage every year.

These are only a few examples showing the urgency and seriousness of the addressing of women's question.

Shortly ago, the UN called on all governments and organizations to eradicate

prejudice against women by formulating new policies and promoting education and awareness of them, and let them take part in all social activities on an equal footing.

The South African President said that no country can achieve sustainable economic growth unless women are put on an equal footing with men.

The Zambian President expressed concern over the discrimination against women practised out of the traditional concept.

Thanks to the government's efforts, the rate of women's participation in social labour has now attained a high level, the Cambodian Prime Minister said, underlining the need to enhance their role in all domains.

The Iranian government appoints women to government organs as part of the measure to raise their social status and role, while the Tunisian government works to protect the dignity, rights and health of the women who are engaged in the agricultural sector.

Mozambique has adopted a new law on the eradication of early marriage to prevent girls' school dropout and early marriage.

In the DPRK it is a social ethic to attach importance to and respect women and therefore they lead a fulfilling life as they add lustre to their dignity at various jobs. Among them are lawmakers, scientists and officials.

KCNA-THE PYONGYANG TIMES

## Briefly

### China Global navigation satellite system unveiled

China's global navigation satellite system "Beidou 3" was launched with due ceremony at the Great Hall of the People in Beijing on July 31.

Declaring the initiation of the global navigation system at the ceremony, President Xi Jinping said that the completion of the system was of great significance in boosting overall national strength of China and in the effort for achieving the "Two Century Goals".

### Russia FM warns against EU's sanctions

The Information and Press Department of the Russian Foreign Ministry said Russia would reflectively respond to the EU's sanctions in an official report issued on July 31.

The report denounced that the EU's decision was adopted groundlessly on the basis of fabricated excuses and the political background of its decision was as clear as day. It strongly demanded again that the EU stop its futile attempt at pressure and return to the execution of elementary norms of international and European laws.

THE PYONGYANG TIMES

## PRESERVATION

## World heritage comes under threat

The world heritage elements are now faced with grave threats in many parts of the world.

Recently, more than 80 percent of the Blue Mountains area of Sidney, Australia, which is inscribed on the World Heritage list was afflicted by a forest fire. It is said that there are many globally recognized animal and plant species on the verge of extinction in the region.

Earlier, the water pools of a national park in Zimbabwe listed as a world heritage element have run out due to the long spell of drought. It has created a negative impact on maintaining ecological environment in the region, causing difficulties in the living of many people.

There are several factors in threatening the world heritage.

The most distinctive cause in recent years is the abnormal weather phenomena.

The earth is getting hotter as time passes. High temperatures hit the world at any time, causing long spells of drought.

Experts argue that the world heritage protection faces a variety of threats caused by human activities, natural

disasters and climate change.

Many countries have taken a series of measures to preserve the world heritage.

The Ecuadorian president stressed the importance of world heritage protection, saying the country would not build a military base in the Galapagos Islands on the world heritage list.

Every item on the world heritage list is associated with the tradition of each country and wisdom and soul of each nation and mirrors the history of development of humankind.

The restoration of relics of world significance is an undertaking to instil national pride and self-esteem into the people of each country as well as to protect and develop the diversity of human civilization. Therefore, every effort to preserve and manage the world heritage better is welcomed by the international community.

The DPRK government pays constant attention to the preservation and management of cultural heritage and relics of national treasure value.

By Choe Yong Nam PT

## AVIATION

# Coach builds model plane with folding wings

Kim Sok Yong (pictured) is a coach at the Pyongyang municipal aviation club.

He has a rather unusual rule of life—doing everything in his own way.

Especially, he devises model planes for training and competitions by himself.

Recently, he contrived a model plane with folding wings in a clever way to draw the attention of professionals in this field.

In order for engine-propelled model planes to be successful in the free flight event, they should reach the maximum height in a short time.

Experts found the answer to the problem in the wings and, as a result, the model plane with folding wings was invented.

However, the building of such planes required solving much more technical problems.



Kim's team's fifth-place finish at an international competition in July 2018 motivated him to buckle down to the building of such a model plane.

It was not so easy for him to find odd moments for designing the new model plane since he was busy with competitions and training.

Moreover, as he was new at building a model plane with folding wings, he failed in several rounds of its test flights.

However, he never succumbed to the failures and difficulties but continued to design and upgrade the folding wings, an electronic control device and other parts, contributing greatly to the completion of the model plane.

The final test flight confirmed that the maximum altitude the plane reaches at a given time and the gliding time have markedly been improved as compared to previous models.

"Nothing is impossible when you are determined," said Kim.

He is now engaged in the research for making improvements to some parts of the model plane.

By Min Chol PT

## SCENERY

# Mt Taesong known as one of eight scenes in Pyongyang

Mt Taesong is located on the boundary between Taesong and Samsok districts in Pyongyang.

The mountain which rises 270 metres above sea level has six peaks standing like a folding screen.

The name is derived from the meaning that the mountain has a large fort built against foreign invasion in the period of Koguryo Kingdom (277 BC-AD 668). It was also called Mt Kuryong, Mt Ryong or Mt Royang.

The mountain is tinged with green all the year around as it is thickly covered with evergreen pine trees.

It is also blessed with various flowers that appear according to the season, artificial lakes and ponds and beautiful waterfalls.

The mountain has also lots

of historical sites from the Koguryo period.

There are over a thousand Koguryo tombs, the vestiges of the fort, the sites of its over 20 gates, small reservoirs and the sites of a food store and the Anhak Palace at the foot of the mountain fort. A section of the fort walls spanning 200 metres and such structures as pavilion, gate and temple on Somun Peak were restored and are preserved in their original state.

Mt Taesong has also many interesting legends telling about its beautiful scenery and the patriotic struggle of the Korean ancestors. Living monuments under special protection in the mountain include ovate catalpa, guttapercha, *Abeliophyllum distichum* and wisteria

all bearing the name of Taesongsan (Mt Taesong).

On top of Jujak Peak of the mountain, there is a cemetery for anti-Japanese revolutionary martyrs who dedicated their lives to the liberation of the country and the freedom and emancipation of the people.

Mt Taesong is all the more popular as a leisure activity centre as there are the Central Zoo, Natural History Museum, Central Botanical Garden and an amusement park.

By Ju Kyong Jin PT



The Nam Gate in Mt Taesong.

## RELIC

# Site highlights architecture of Koryo

There is Manwoltae, the site of royal palace in the period of Koryo Kingdom (918-1392), on the southern ridge of Mt Songak in Kaesong.

Manwoltae covers an area of 1.25 million square metres and had two castles.

The main gate in the east of the castle where the government offices of Koryo Kingdom were situated was called Kwanghwa and the castle had gates in the north, west and south and other small entrances.

The front gate in the south of the castle where palace buildings were located was called Sungphyong.

On the way to the king's palace, there were Kwanghwa and Sungphyong gates, as well as Sinbong and Changhap gates which were built in order in the north.

A wide courtyard called Kujong was placed between Sungphyong and Sinbong gates.

Important national functions took place there.

A narrow yard is seen after passing through the site of Changhap Gate in the north of the site of Sinbong Gate, and a high embankment with four magnificent stone stairways

was built in front of the yard.

When one goes up the stairs and passes through the site of main gate of the Hoegyong Hall, a wide courtyard comes into sight around which corridors were built and there is the site of main hall of Hoegyong in the north of the yard.

Behind the site of the hall, large palaces stood one after another.

In the west of the central architectural group, there were palaces in which the king resided as he regularly managed state affairs.

A greening area and big pond were built respectively in the north and east of Manwoltae.

The Koryo Kingdom speeded up the construction of Manwoltae and completed the royal palace in 919.

A noticeable thing is that the composition of the royal palace of Koryo Kingdom and the make-up of major palace sites show the strong cultural effect of Koguryo which existed between 277 BC and AD 668.

In June 2013, UNESCO's world heritage committee registered Manwoltae as a World Cultural Heritage site.

By Ri Sung Ik PT



The palace site of Manwoltae on the world cultural heritage list.

## MINERAL WATER

# Water with distinctive taste and medical effects

Okryu mineral water that gushes out on the shore of the Taedong River in Pyongyang has long been well known for its medical effects.

Rich in such minerals as potassium, sodium, calcium, magnesium, iron ion, chlorine ion and others, it is especially good for the treatment of chronic gastritis, chronic enteritis and colitis, chronic bronchitis, minor diabetes and secondary anaemia.

According to Hong Ae Sun, who has been working at the Okryu mineral water shop for

over 30 years, the water has never run out in all four seasons, but attracts more people as the days go by.

"I had suffered from chronic gastritis for a long time, but ever since I started drinking the water, my intestines have been functioning properly and my digestion has been improved. Neighbours say that I look younger than I am in my age and I think it is the benefit of this mineral water," said 70-year-old Pak Chun Sam living in Othan-dong of Central District,

Pyongyang.

Kim In Ae, a woman living in Kyogu-dong of Central District, also said that her family has been using the Okryu mineral water as drinking water and for cooking rice every day for four years and none of her family members has been to hospital ever since.

Regular drinkers say that the mineral water is very good for the digestive system, it has incredible treatment effects and its freshness and fishy taste produced by iron, a constituent of water, are very impressive.

According to sales assistant Jo Ri Gyong, the mineral water is pumped up from the depth of 192 metres underground.

By Jong Chol PT

