# 《美丽的高岭塞罕坝》

Majestic Highland: Saihanba

包装字幕:

"55 年来,河北塞罕坝林场的建设者们听从党的召唤,在'黄沙遮天日,飞鸟无栖树'的荒漠沙地上艰苦奋斗、甘于奉献,创造了荒原变林海的人间奇迹,用实际行动诠释了绿水青山就是金山银山的理念,铸就了牢记使命、艰苦创业、绿色发展的塞罕坝精神。"

习近平

2017年8月

"For 55 years, the builders of the Saihanba Forest Farm in Hebei Province have responded to the call of the Party. Through hard work and selfless dedication, they miraculously turned a barren, yellow wasteland into a lush, green forest. Their efforts exemplify the belief that lucid waters and lush mountains are invaluable assets, representing the Saihanba the Saihanba spirit-staying true to the original aspiration being hardworking and enterprising, and pursuing green development."

Chinese President Xi Jinping

August 2017

如果,可以听到自然与人类的对话,在这片美丽的高岭上,这声音就是飞鸟的振翅,是草木的生长,是林海的松涛,是湖面的荡漾。 如今眼前的景象,正如它最初时的样子,是河的源头、云的故乡、花 的世界、林的海洋。

Although we may not know it, nature is communicating with us constantly. Its voice can be heard in the sound of birds, taking flight, seedlings, breaking free from the soil, forests, whispering in the breeze, and the gentle lapping of restless waves. Now, this land has returned to its original state, revealing its life, giving waters, streaming clouds, seas of flowers, and an ocean of trees.

这里是地处河北省最北端的塞罕坝,位于内蒙古高原与河北山地交接地带。它的名字是蒙汉合璧语,意为"美丽的高岭"。300多年前,这里是清代皇家猎苑,被称为"木兰围场"。那时,每逢夏秋时节的"木兰秋狝",帝王与将相兵勇集聚于生机盎然的高岭上,策马围猎,与各族首领把酒言欢,热闹非常。

Saihanba located at the northern tip of Hebei province, bridges the inner Mongolia plateau with the mountains of Hebei. Its name, a blend of Mongolian and mandarin languages can be translated to beautiful highland. Over 300 years ago, this expanse was known as the Mulan hunting ground. Every year as summer transition to autumn emperors, generals, soldiers and tribal leaders would assemble on this thriving highland to hunt and engage in rivalry. The entire land was alive and vibrant.

这里也曾风沙蔽日,草木凋零。鸦片战争后,清朝国势衰颓,于 1863年将木兰围场开禁放垦,茂密的森林以肉眼可见的速度急剧减少。加之后来战火不断,失去了树木的庇护,高岭的美丽不复存在, 气候渐趋恶劣,最低温度达到零下43摄氏度。伴着肆虐的狂风,掠 过内蒙浑善达克沙地的风沙, 一路南下, 直逼北京。

But there came a time when severe dust storms ravaged the region, causing the vegetation to wither and die. In the wake of the opium wars, the Mulan hunting ground was opened to farming, which led to rapid deforestation. Subsequent wars further decimated the forests and the highlands beauty gradually began to fade. The climate also took its toll on the land as temperatures could plummet as low as -43 °C. Making matters worse, sandstorms from inner Mongolia Hunshandake desert were blowing southwards, posing a threat to Beijing.

新中国成立后,为了遏制风沙侵袭,1961年,时任国家林业部国有林场管理总局副局长的刘琨临危受命,带领专家来到这片茫茫荒原,实地考察建立机械化林场的可行性。他们踏寻数日,发现了一棵存活了百余年的华北落叶松。正是这棵树,带来了造林的希望,成为了历史的见证。

After the founding of the people's republic of china,Liu kun,then deputy director of the state forestry administration was entrusted with an important mission to assess the potential for establishing a mechanized forest farm.leading a team of experts.In 1961,he discovered a centuries old north deciduous pine.It was this tree that instilled hope to his mission.

1962年2月,国家正式决定在承德围场塞罕坝建设大型机械林场。一声令下,来自全国18个省市127名农林专业的大中专毕业生,奔赴这片荒漠高原,与原有林场的242名干部职工一起,肩负着党和国家交予的使命,拉开了塞罕坝艰苦创业的序幕。

In February 1962, the Chinese government formally established a

large scale mechanized forest farm in Saihanba of Hebei province.In response,127 agricultural and forestry graduates from 18 provinces and cities across China,swiftly joined the forest farm's original staff of 242 members.History was about to be made.

## 第一集《造林》

#### **PART1** Afforestation

2022 年 8 月,盛夏的坝上林海连绵,绿披山川。沧海桑田间,塞罕坝机械林场已经走过了整整一个甲子的时光。在承载着第一代务林人最深记忆的马蹄坑营林区,81 岁的陈木东漫步其中,前来看望长眠在此的一位故人——塞罕坝机械林场第一任党委书记,王尚海。

August 2022 mark the 60th anniversary of the Saihanba forest farm. The expansive forests now draped the mountains in a luxurious cloak of vibrant green. Strolling solemnly through the Matikeng, a forestation area is 81 year old Chen Mudong, who is paying a visit to the resting place of his old friend Wang Shanghai, the farm's inaugural party committee secretary.

## 纪实: 陈木东在尚海林凭吊王尚海

陈木东:王书记,你的战友陈木东来看你来了。咱俩在塞罕坝 1964年造林,在那个生活条件、气候条件艰苦的情况下,是你亲自 指挥把这片林子造起来的,现在都成了金山银山了。王尚海,老兄弟, 老哥们,老领导,安息。

Chen Mudong:Party secretary Wan,it's your comrade Chen Mudong.We planted trees here back in 1964.You guided us through

difficult conditions, and now this forest stands as an immeasurable treasure. Wang Shanghai, my old brother, friend and leader, may you rest in peace.

1962年初春,时任承德行署农业局局长的王尚海,接到了调任 塞罕坝机械林场党委书记的任命。这位抗战时期的游击队长明白,在 那片空旷的荒漠上,虽然没有了硝烟与战火,但等待自己的将是一场 异常艰苦的新的战斗。

In the early spring of 1962, Wang Shanghai had just taken over the role of party secretary at the Saihanba forest farm. Although he had fought in the war of resistance against Japanese aggression, he knew the task before him was no less important and would require all of his effort, stamina, and and willpower in order to succeed.

临行前,王尚海把全家人召集到一起,在照相馆拍下了一张合影,随后带着八十多岁高龄的父亲,还有妻子以及五个未成年的孩子,以 破釜沉舟式的决绝,举家搬上了塞罕坝。

Before his departure, Wang Shanghai gathered his family together for a group photo. He then took all his cherished possessions and moved to Saihanba along with his wife, their five young children, and his 80 year old father.

陈木东采访: 你说我们年轻人挺乐观的,有时候因为我们领导都是以身作则。在塞罕坝,首先去的都把家安这儿了。王尚海家、刘文 仕家,还有我们林业部去的张启恩,把家都安排在坝上了。就是准备 在那里大干,要把荒山绿化。

Chen Mudong: We were young and full of optimism, fueled by the

inspiration from our leaders. The initial group that arrived at Saihanba brought their families along. Wang Shanghai, Liu Wenshi, and Zhang Qi'en from the Ministry of Forestry all located their families to Saihanba. Everyone was dedicated to transforming these barren hills into flourishing green forests.

陈木东是湖北武汉人。1963年3月,22岁的他从吉林白城林业机械化学校毕业后,来到了塞罕坝机械林场。与当年许多一同上坝的年轻人一样,他们对这里环境之恶劣并没有心理准备。

In march 1963, Chen Mudong, a 22 year old from Wuhan, Hubei province joined the Saihanba team after graduating from the Baicheng forestry school in Jilin province. Like many of his peers, he too was unprepared for the unforgiving environment.

陈木东采访: 我们是越走越寒心,一到坝上那就是有雪啊,一片白,我们反正看到挺凄凉的,同学们心里头挺寒酸的,觉得这地方太苦。

Chen Mudong: The further we went, the more our spirits sank. When we arrived at the highland, the landscape was draped in snow, and completely desolate. My classmates and I experienced a profound sense of discouragement, convinced that this place presented an exceedingly formidable challenge.

**曾学奇采访:** 我们住的是马架子,就是这么一搭得了。地下往下挖一挖,就地窨子,然后这儿搭一个炕。早上起来,晚上洗脸你要是不把水泼了,早上洗脸盆你就甭使了,冻得嗒嗒的,毛巾也冻里头了,冻个大坨,身上冰凉冰凉的,上边有时候一透风刮的风一层雪,都是

戴着帽子睡觉,太艰苦了。

Zeng Xueqi:We lived in makeshift huts shaped like this.We dug into the ground to make a sort of bunker with a bed inside.If we forgot to empty the washbasin at night,it would be frozen solid by morning,along with the towel.We were freezing cold most of the time.Sometimes,the wind would blow snow through the gaps in our huts.We slept with our cotton-padded hats on.It was really tough.

时国成采访: 渴了之后你喝啥水, 离河套边近, 趴地下就喝。

Shi Guocheng: When we were thirsty, we drank directly from the nearby river.

对于他们这一代务林人来说,艰苦的环境,筚路蓝缕的创业经历,如今都成为了人生中最珍贵的记忆,也是这些老友们相聚时最常聊起的话题。

Today, their pioneering efforts are celebrated and it brings these brave men a great sense of pride to think back on what they had accomplished. But the harrowing experience still sends chills down their spine when they speak of it.

# 纪实: 陈木东与当年的同事回忆坝上岁月

陈木东:夜间翻地的时候,那个狼顺着这个拖拉机开的后垄沟, 它找耗子吃,咱们车光一反,就看那个狼眼睛啊(冒着)绿光,往后 一看好几个狼。

Chen Mudong:At night, while we were plowing, a pack of wolves were following our tractor, hunting for rats in the tractor's tracks. When our lights hit them, their eyes shone green.

相较于困苦的生活条件,如何造林成活是他们面对的更大考验。塞罕坝气候寒冷,无霜期仅有67天,年降水量也只有400多毫米,地质条件十分复杂,没有任何经验可以借鉴的第一代务林人,起早贪黑、摸爬滚打,却收效甚微。建场初期的两年间,林场造林面积6400亩,成活率却只有8%。

As harsh as their living conditions were, there was still the ever greater challenge of planting trees in such complex terrain. Compounding the problem, the regions climate provided just 67 frost free days and a scant 400 millimeters of annual rainfall. Without guidance, this first generation of foresters, despite their unwavering commitment, found limited success. During the first 2 years, they planted across an area of 4 square kilometers. However, only 8 % of the seedlings survived.

陈木东采访: 头几年造的林,苗木都是从外地东北调苗的,调去的苗子都有一些失水了,都干巴了,这么样的存活率也低。再要这么造下去,不存活,机械林场就有可能要下马。王尚海书记就下决心要进行大面积的机械造林。

Chen Mudong: A significant portion of them arrived dehydrated, leading to a low survival rate. if this continued, there was a real possibility the forest farm would have failed. So party secretary Wang Shanghai made the crucial decision.

反复分析失败原因,仔细研究地理特点,王尚海一班人将目光投向了位于总场东北部 10 公里外的马蹄坑。这里,三面环山,南临一条小河,形如马蹄踏痕,加上地势较为平坦,适合大面积机械造林。1964 年春,决定林场存活与否的马蹄坑大会战开始了。

After a thorough analysis of their previous failures and the geographic characteristics of the region. Wang Shanghai is team focus their efforts on the Matikeng area, situated 10 kilometers northeast of the main site. This new horseshoe shaped expanse of land was nestled between mountains on three sides and bordered by a river to the south, making it an ideal candidate for extensive mechanized deforestation. In the spring of 1964, the forestation endeavor that would shape the destiny of the forest farm began the Matikeng area.

**潘瑞平采访:** 老天虽无情,也怕铁打汉。满(山)栽上树,看你变不变。

Pan Ruiping:Nature can be harsh,but it yields to human determination.let us cover the mountain with trees.

改良土壤、改进栽植方式,将遮荫育苗改为全光育苗,23万株 承载着林场人希望的落叶松树苗,被栽植在516亩沙地之中。

By enhancing the soil conditions and refining their planting techniques, they completely changed the landscape. Approximately 230,000 deciduous pine seedlings were planted across an expanse of 344,000 square meters of sandy terrain.

李兴源采访:怎么改土,就是隔沙埋碱。就是把上边这好土给它取出来,下边弄成小石头子,把它一铺,铺多少,铺十来公分,十五公分左右。把毛细管给切断了,切断之后碱就反不上来了。老百姓说见苗三分喜响,就能把苗子基本上就出全苗了。

Li Xingyuan:How did we enhance soil conditions?we remove the topsoil and added a layer of stones, about 10cm to 15cm thick, to prevent

the buildup of alkali. As the saying goes, germination signifies the promise of a harvest. This approach guaranteed that nearly all the seedlings would survive.

20 天之后,这些幼苗放叶率高达 96.6%,一丝曙光从人们心头升起。

20 days later, about 97 % of the seedlings began to bear leaves. It was an astonishing accomplishment.

刘文仕采访:培养苗子要求也有三句话, 矬胖子、大脑袋、大胡子苗子。矬胖子就是苗子不要高, 而是要粗。大脑袋, 脑袋峰顶好, 根跟葱似的, 大胡子苗子。

Liu Wenshi:Three traits were sought in the seedlings:a plump body,a big top,and sturdy roots."A pump body" emphasizes thickness over height,"a big top" signifies a well-developed upper section,and the "sturdy roots"refers to a root system resembling that of spring onion,like a thick beard.

像盼望幼儿成人一样,塞罕坝人时刻关注着这抹稚嫩的绿色。入秋,令人无比振奋的消息终于传来,春季栽下的幼苗成活率高达95%。他们打破了高原荒漠"植树不活"的技术壁垒,开创了国内机械栽植针叶树的先河。造林季节也由每年春季造林发展到春秋两季造林,成片的幼林升腾着希望,塞罕坝的绿色版图开始迅速扩张。

Like attentive parents, the foresters watched their young seedlings grow with eager anticipation, that autumn more exciting news emerged. 95% of the seedlings they planted in spring had survived. It was a tremendous accomplishment and a historical one. They were pioneers of

the first mechanical coniferous tree cultivation effort in China. From that point on the forestation season extended from spring to autumn. And a burgeoning expanse of green forests began to sweep across the Saihanba region.

陈木东采访: 我们刚去的时候, 王尚海那时候就跟我说, 你别看现在我们塞罕坝这么荒凉, 等过个三十年二十年之后, 天津北京的有人都上这来, 上我们这来参观, 这个话不就是已经实现了他的、我们的梦想。

Chen Mudong: When we first arrived, Wang Shanghai said to me,"people from major cities like Beijing and Tianjin will come here to visit." Wouldn't you say now that our shared dream has come true?

英雄,永远不会被遗忘。1989年,王尚海病逝,林场遵照他的遗愿,将骨灰撒在了马蹄坑营林区,并将这片林子命名为"尚海纪念林"。岁月流逝,英气长存。2022年8月,在塞罕坝机械林场建场60周年之际,"全国林业英雄林"揭牌仪式,在这片百万亩林海的起源地举行。那场意义非凡的大会战,那段伏冰卧雪、战天斗地的经历,被深深刻印在塞罕坝的绿色年轮里。

Heroes like them will forever be embedded in the people's memory. When Wang Shanghai passed away in 1989,the forest farm honored his dying wish by scattering his ashes across the Matikeng forest area. Today it has been renamed the Shanghai memorial forest. In commemoration of its 60th anniversary, a ceremony was held at the expansive forest to honor the men responsible for this incredible feat. Etched into this large stone monument are the words national forestry heroes. While many of the men

who took part in this historical effort were not there to see it personally. Their spirit will always live on within each tree of this glorious woodland.

## 纪实: 陈彦娴在家中翻看老照片回忆过去

马蹄坑会战,是塞罕坝机械林场命运的转折点,也是"六女上坝" 故事的起点。今年79岁的陈彦娴,从林场退休后,在围场县城过着 幸福的晚年生活。每年,她都会格外留意一个日子,8月23日。1964 年的这一天,她与五名女同学第一次来到了塞罕坝,她们的人生轨迹 从此与这片土地重叠在了一起。

The efforts at Matikeng marked a crucial turning point for the Saihanba mechanized forest farm, as well as the beginning of another important story. 79 year old Chen Yanxian once worked at the forest farm. Every year she commemorates a particular date with reverence. August 23rd, it was on this day in 1964 that she and five female classmates embarked on their first journey to Saihanba, inexorably linking their own lives with the forest.

陈彦娴:这张照片那就早了,它是64年我们即将奔赴塞罕坝(机械) 林场的时候,我们集体在承德照相馆照的。我们照完了这张相以后呢,说咱们得题个词啊,得有意义啊。我们想了半天,就题词"勇往直前"。

当时我们都十八九岁,我们把最好的青春献给了塞罕坝。有时候我做梦呢,真的非常想回到塞罕坝,看看这片林子。

Chen Yanxian: This photo was taken in 1964, right before we set out for Saihanba. After leaving the studio, we felt it deserved a poignant caption. We settled on "march bravely forward".at around year 18 of age, we devoted the prime of our youth to Saihanba. I occasionally dream of those times and yearn to see the forestes again.

## 纪实: 陈彦娴在去塞罕坝的车上讲述六女林的故事

陈彦娴: 六女上坝以后第二年, 我们书记领着我们到这个山坡造了一片林子。造完了以后书记说, 你们造的这片林子就叫"六女林"吧, 我们当时也挺高兴的, 说行啊。

Chen Yanxian: A year after we arrived, our secretary led us up the hill to begin planting. when we finished, he suggested naming it the "six woman forest". we were so happy, and said "Yes!"

在这片以她们的事迹而命名的林子里,陈彦娴唱起了当年学校老师为了给她们送行所作的歌曲。

Inside the forest named after Chen and her friends,she sings a farewell song composed by their teacher.

# 纪实: 陈彦娴在林子里唱《六女要上坝》

陈彦娴: 六女坚决要上坝, 嘿, 要上坝! 哪怕它, 风吹雨打都不怕, 哪怕它, 虎狼出没无人家, 六女坚决要上坝。

Chen Yanxian:Regardless of the challenge,be it wind or rain.In the presence of tigers,wolves and solitude's strain.This six girls come to Saihanba with great determination.

坚决要上坝的六位女同学,是在马蹄坑大会战的感召下,满怀着 浪漫理想,申请前往塞罕坝造林的。当时的陈彦娴憧憬着,要像新中 国第一位女拖拉机手梁军一样,开荒垦地,但六女上坝后的第一份工 作,却是千层板分场的育苗员。 Inspired by the achievements in Mati Keng. These six idealistic women gave no second thought to lending themselves to the endeavor at Saihanba. Chen Yanxian influenced by Liang Jun new china's first female tractor driver aspired to make her own valuable contributions.

#### 纪实: 陈彦娴介绍苗圃的变化

陈彦娴:原来这四周都是荒山,这就是为了在坝上把苗(子育出来)才成立的这个苗圃。整个这个苗圃也就十几个人不到二十人,分新育队、换床队。我们第一年把苗子育起来以后还得挖出来,再栽到另一个苗床上,第三年才能出山。

Chen Yanxian:Initially,this entire area was all desolate hillsides.the nursery garden was established for seedling cultivation and employed just over a dozen workers.we were organized into a breeding team and a seedbed-transplanting team.After nurturing the seedlings for a year,we would relocated them to a different seedbed.Only by the third year could they be planted.

甄瑞林采访:这个育苗一开始分这么几个阶段,第一是种子催芽, 地表温度,空气温度,干湿度必须得掌握好;第二个部分就是播种, 先是用筛子筛,行距、株距就没法掌握,后来逐渐发展成水车和播种 器;然后就是出土,那时候没有化肥之类的,底肥也就是有机肥,马 粪、牛粪和大粪,这是最好的肥。

Zhen Ruilin:There are various phases to seedling cultivation.The first is seed germination,Necessitating precise control of soil surface temperature,Air temperature and humidity,Next comes sowing.Initially we use sieves.Yet they proved challenging to regulate row and plant

spacing.so we used carts for watering and seeding.since there were no chemical alternatives. These proved to be the most efficient fertilizers.

**王晚霞采访:**完了就接着开始选苗了,那选苗更冷。那苗子还得蘸着水,失水就不行了,蘸着水,那手都裂口子。为了造林都得把苗子选好了,等级分好了,数量准确了,这都不能含糊。

Wang Wanxia: After that, we began selection seedlings, requiring us to endure even colder temperatures. the seedlings had to be kept in water to prevent dehydration. The frigid water led our hands to cracking. For successful afforestation, precise selection, grading, and counting of each seedling had to be carried out meticulously.

马蹄坑会战的胜利,让塞罕坝务林人认识到自主育苗的重要性。 在老一辈技术员李兴源等科研人员的努力下,树苗从过去的两年出山 到当年出山,从平地育苗发展到山间育苗,育苗关被彻底攻克。塞罕 坝务林人将目光投向了只能人工造林的沟梁地带。

The success at Matikeng highlighted the importance of independent seedling cultivation. Thanks to dedicated technicians like Li Xingyuan, the seedlings growth cycle was reduced from 2 years to 1. And the cultivation zone expanded from flat to mountainous terrain. Having effectively addressed the challenges of seedling cultivation, the Saihanba foresters then shifted their focus to the ravines and ridges that required manual a forestation.

在今天塞罕坝梁脊的主干道上,有段陡峭的连续弯道。曾经令陈 彦娴等务林人无比棘手的沙胡同,就坐落在这峭壁一侧。昔日堆积如 丘的黄沙,如今已经生长出茂密的森林。 Along the main road through Saihanba, there's a particularly steep and winding stretch. It was along this area formerly known as sand alley, where foresters, like Chen yanxian faced the most significant challenges.

## 纪实: 陈彦娴在沙胡同介绍在这里植树时的场景

陈彦娴:这个道过去叫沙胡同,顾名思义就是它这个路全是沙子,连石子都没有,那时候雪要比较大,然后呢我们是头一年把地整好了以后,第二年开始造林,就是为了当雪一化的时候我们把树栽进去,保证这个树的成活率。

我们这一辈子就是在平凡的不能再平凡的岗位上,一辈子只是栽树。我们只要把树在这片土地上栽活了,这就是我们完成了党和国家的任务。

Chen Yanxian: This pathway was formerly named Sand Alley. It was all sand. There was not a single stone. There was considerable snowfall during that period. We continued our work in the following year. Our objective was to begin planting as soon as the snow melted in order to ensure a high survival rate. We lived our lives humbly, dedicating ourselves to tree planting. By ensuring the trees flourished, we fulfilled the mission entrusted to us by the party and the nation.

1982年,塞罕坝机械林场走过了 20 个年头。在日复一日的坚持中,一个个难眠的冬夜、一次次的技术攻关、一场场的造林战役,第一代务林人用青春在荒原上造林 3.2 亿余株,超额完成了既定任务。听到这个消息,国家林业局当年带队考察的刘琨泪水纵横: "在塞罕坝那样的地方造林,没有一种信念、没有一种精神是不行的。"

By 1982, the Saihanba, mechanized forest farm had been operational

for 20 years through unwavering dedication,innumerable sleepless winter nights and continuous technical advancements. The initial generation of foresters managed to plant over 320 million trees, surpassing even their own lofty goals. Upon learning of this achievement, Liu Kun from the state forestry administration was moved to tears stating. This couldn't have been achieved without profound belief and spirit.

**塞罕坝机械林场场长陈智卿采访**: 1962 到 1982 年,就是大面积造林任务取得进展成效最快、最显著的 20 年。当时国家下达 4 项目标任务书:探索大型国有机械林场管理的经验;积累高寒地区育苗造林的经验;改变风沙侵袭北京的形势;积累中小经济木材。这 20 年已经全部顺利完成,大面积造林成果已经展现。

Chen Zhiqing:China experienced major progress in large-scale afforestation. The government aimed to improve its management of state-owned mechanized forest farms, advance seedling cultivation in cold areas, mitigate sandstorms in Beijing, and accumulate more medium and small-sized timber. In that 20-year span, they showed significant results in large-scale afforestation.

很多人在用不同的方式记录着塞罕坝的历史。浑善达克沙地与克什克腾旗交界的南侧,是塞罕坝机械林场三道河口营林区。一位 82 岁老人,每隔十年都会特意爬上这里的一座山坡,用手中的相机拍下周围环境的变化,今年已经是他第六次来到这里了。

The Sandaohekou forestry district of Saihanba lies along the southern border between the Hunshandake desert and the Kashketeng banner. Every 10 years, 82 year old Huai Fengming climbs this hill to

capture the evolving landscape with his camera. This time marks his 6th visit to the peak.

# 纪实: 怀凤鸣讲述第一张照片的拍摄地和这里六十年的变化

怀风鸣:那次有机会,我搭车到三道河口就这块儿,看着这片整个都是荒山,没有一棵像样的树。你看我这照片,是第一张来到三道河口照的,从照片里看着,高低起伏的都是沙丘。后来拍完以后,每十年,1962年、1972年,八十年代,1982年左右,都来看一看,都有不同变化。现在到今天,五六十年了,变化就更大了这片,三道河口和千层板连起一片林海了,当时的荒山再也见不着了。

Huai Fengming:Once,i had the opportunity to visit Sandaohekou.I was greeted by barren hills that lacked any substantial trees,take a look at this.It is the first one i took,in which you can see sand dunes stretching as far s the eye can see.Since 1962,i have returned every decade to observe the changes.The metamorphosis is truly remarkable.Sandaohekou and the Qiancengban areas have converged into an expansive forest.The desolate hills of the past are gone.

怀凤鸣是 1962 年的初秋从承德农业专科学校毕业,与 49 名同学一起来到了塞罕坝支援林场建设的。当年所带行囊里为数不多的物品中,有一台老式海鸥相机,成为怀凤鸣坝上岁月最重要的伙伴。

In 1962, Huai Fengming and 49 classmates graduated from the Chengdu vocational college of agriculture, and immediately lent their support to the construction of Saihanba forest farm.

8 部不同年代的相机, 2 万多张照片, 怀凤鸣记录下了塞罕坝机 械林场的大事小事, 其中就包括了 1977 年那场让十几年造林成果损 失过半的雨凇灾害。

Using eight different cameras,he took more than 20,000 photos of Saihanba over six decades. His comprehensive album also contains pictures from the glazed ice disaster of 1977, which decimated more than half a decades reforestation progress.

**怀凤鸣采访:** 这场雨凇灾害(塞罕坝)机械林场受灾比较厉害,据说当时是有57万亩,连电线杆子都压折了,压折了600多根吧,百分之七八十都受灾了,冰溜子直径也得有个两公分多。一个20公分的草棍,就挂着1公斤重,3米高的人工林,十年生的就250多公斤,那能压不折么,当时场长都哭了。

Huai Fengming: The glazed ice disaster had a profound impact on Saihanba. It affected an estimated 380 km² 70-80% of its total area causing over 600 electric poles to collapse. In the harshest of examples, one 10-year-old tree standing just 3m in height was draped in 250kg of icicles. It was enough to bring the farm director to tears.

**张耀华采访:**然后我们就号召全厂职工,这个手拿着树,这手拿个棍,就把冰全都敲下来,一棵一棵地敲。那时候我敲冰溜子时我就想,你这从小就在这长着,你是塞罕坝的希望啊,你可不能倒。就那样,我们硬是把那些小苗一棵一棵地救起来了,那是塞罕坝人的希望。

Zhang Yaohua:Using sticks,we meticulously removed every icicle from each tree.At the time,i was thinking to myself,you have flourished here since your days as seedlings.You are the hope of Saihanba.You must not fail.In the end,we saved each and every sapling.

塞罕坝务林人的悲喜,始终和这片林子、这片土地息息相关。如

今,怀凤鸣重走当初照片里沙化最严重的取景地,遥想当年,塞罕坝 如今的面貌让他欣慰不已。

Undoubtedly,the joys and sorrows,these men and women experienced were intimately connected with the forest they served. Like a doting father, Huai Fengming still roams the forest from time to time taking immeasurable pride in how tall his children have grown.

纪实: 怀凤鸣在望沙楼、七星湖讲述这里从荒漠到绿洲的变化 怀凤鸣: 眼前就是这个林子这儿,这都是沙子。这块儿有点小灌 木,然后这都是平地,赶到高一点的就是沙丘,往远处看都是这样的。

现在造起林子就连成一片了。

Huai Fengming: The forest ahead was once entirely sand. Only a few shrubs dotted the landscape, and beyond them lay vast stretches of flat, barren terrain. The taller section formed sand dunes that extended as far as the eye could see. Today, the forests have merged together seamlessly.

为了给后人呈现一个真实的塞罕坝,更为了纪念那些为林场奉献 终生的务林人,怀凤鸣这些年一直在对六十年间所拍摄的照片进行梳 理。堆积起达一米多高的草稿,经过几百个废寝忘食的日夜,如今, 三大本反映塞罕坝半个多世纪变迁的图册基本完稿。

In order to offer an authentic portrayal of Saihanba for future generations and honor those who devoted their lives to the forest farm. Huai Fengming has compiled a comprehensive photo album that spans more than half a century. After countless sleepless nights of sorting through stacks of photos, he is finally approaching its completion. A three

volume work that has been 60 years in the making.

怀凤鸣采访:已经拍摄了60年了,将来能够生存一天,拿住照相机一天,我就要记录塞罕坝一天。将来变成什么样,肯定变得比现在好得多。我参与了造林,我见证了变化,我为塞罕坝林海的失而复得而骄傲,特别骄傲。

Huai Fengming:I have been taking photos for 60 years. As long as i am alive and capable of holding a camera, i will continue to document Saihanba. Its future is bound to be even brighter than today. I have participated in its afforestation, witnessed its remarkable transformation, and i am deeply proud of what we have accomplished.

前赴后继,艰苦创业,曾经的美丽失而复得,绿色明珠再放异彩, 这是一代代务林人用汗水与生命向世界讲述的中国故事。

Through successive generations of safeguarding. The land is unrecognizable when compared to its dismal beginnings. With its emerald forests, Saihanba now stands as a shining example of humankind giving back to nature.

2017年12月5日,在肯尼亚内罗毕举行的第三届联合国环境大会上,联合国环保最高奖项——"地球卫士奖",颁发给了中国塞罕坝林场建设者,包括陈彦娴在内的三代务林人代表站上了举世瞩目的领奖台。

And then,on December 5th,2017,during the third united nations environment assembly in Nairobi,Kenya,the builders of Saihanba forest farm were honored with the un highest environmental accolade.The champions of the earth award there to accept the award was Chen Yan

xian, along with representatives from 3 generations of foresters.

**陈彦娴采访**: 当我们接过这个地球卫士奖的奖杯的时候,我们真的都热泪盈眶,我这一生真的没有白活。索尔海姆就跟我们说,说你们中国人是了不起,但是我一定要到塞罕坝来看一看。我当时的理解,就是他还不是特别地觉得你们百万亩林海是人工造的。

Chen Yanxian: When we received the champions of the earth trophy. We were genuinely moved to tears. I felt that my life had truly meant something. Solheim said, "the Chinese are remarkable, but I must visit Saihanba to see for myself." Even he couldn't imagine that we had planted forests spanning hundreds of square kilometers.

2018年的夏天,联合国环境署执行主任埃里克·索尔海姆如约 而至。眼前的万顷人工林,是那么的真实又不可思议。

In the summer of 2018, Eric Solheim, the executive director of the united nations environment program, fulfilled his promise and witnessed the truly remarkable accomplishment for himself.

索尔海姆说,塞罕坝在防沙治沙、造林绿化等方面的成功案例和 经验,值得很多国家和地区推广学习,这尊"地球卫士奖",塞罕坝 实至名归。

In his remarks,he noted that Saihanba achievements should be standard for other countries and regions,and reiterated its worthiness of the champions of the earth award.

2021年,联合国防治荒漠化领域的最高荣誉"土地生命奖",颁给了塞罕坝机械林场,用以表彰人类生态文明发展史上,中国贡献

的这一光辉范例。

In 2021,the Saihanba forest farm was bestowed with the UN most esteemed recognition in desertification control the land for life award. Yet another accolade commanding china for its exemplary contribution to the advancement of ecological civilization.

半个多世纪的时光,三代人务林人的驰而不息、久久为功,造就了这片"黄沙遮天日,飞鸟无栖树"的荒漠,变为百万亩林海的人间奇迹,铸就了牢记使命、艰苦创业、绿色发展的塞罕坝精神,成为中国共产党精神谱系的重要组成部分。时光向前,初心不改。那些写满奋斗的热血青春,从未褪色。这里每一棵树的年轮里,都镌印着创业者栉风沐雨的光辉征程,每一棵树的枝叶中,都孕育着新的希望与生机。

From the humblest of beginnings,a land of unimaginable wonder has emerged with their shared vision, diligent work ethic and love of nature. The Saihanba foresters were able to create an entire ecosystem,a world where flora and fauna can thrive peacefully. The cycle of life is sure to continue for thousands of years. Now, who else can say that.

60年,115万亩林海,3亿多株挺拔的树木,接续奋斗的三代塞 罕坝务林人,铸就了一道守卫京津冀和华北地区生态安全的绿色长 城。

Over the span of 60 years, three generations of foresters in Saihanba have cultivated approximately 767 square kilometers of forest, resulting in the growth of over 300 million thriving trees. This green Great Wall stands as an ecological guardian for Beijing, Tianjin, Hebei Province, and the rest of northern China.

2021年8月23日,习近平总书记在考察塞罕坝机械林场时再三 叮嘱: "防火责任重于泰山,要处理好防火和旅游的关系,坚持安全 第一,切实把半个多世纪接续奋斗的重要成果抚育好、管理好、保障 好。"

On August 23rd,2021, during President Xi Jinping's inspection of the Saihanba mechanized forest farm,he underscored the significance of fire prevention. Furthermore, he stressed the need to promote tourism, provide safety, and urge for the preservation, management, and safeguarding of the last 60 years of achievements in afforestation.

如今,在塞罕坝森林防火、病虫害防治等平凡而重要的岗位上,有夫妻的坚守,有父子的同心,有新生代的融入,有高科技的护航。像先辈一样,他们以林场为家,与风雨为伴,守护着这来之不易的造林成果,跨越时空的塞罕坝精神在绿色接力中薪火相传。

In Saihanba today,a new generation of foresters have answered the

call, assuming vital roles such as fire prevention and pest control. Empowered by cutting-edge technology, they are fully committed to safeguarding the forests that have been entrusted to them and stand prepared for any challenge nature's wrath may pose. Like those that came before them, they understand the importance of upholding Saihanba 's great legacy.

# 第二集《护林》

#### Part2 Forest Guardians

纪实: 刘军和王娟在望海楼瞭望

王娟: 刘军你看那片是雾还是什么?

Wang Juan:Liu Jun, is that mist or smoke?

刘军: 哪块儿? 那块儿移动得比较快, 纯白色, 没有根, 雾。

Liu Jun:Where?It's moving quickly.It's white,and doesn't have a source,it's mist.

在海拔 1900 米的月亮山望海楼, 防火瞭望员刘军、王娟夫妇正 时刻对周边区域的林海进行火情观测。

Liu Jun and his wife, Wang Juan, vigilantly guard the forests from atop the Moon Mountain Watchtower, which sits at an altitude of 1,900 meters. With a 360-degree view of their surroundings, they are perfectly situated to spot any sign of fire.

他们的日常工作分两个阶段,从早 6 点开始到晚上 9 点,在 15 个小时的时间里,每 15 分钟用望远镜眺望一次方圆 20 公里的森林;晚上 9 点以后,每隔一个小时观察一次。每一次的瞭望结果都要记录

在册,有情况报情况,无情况报平安。

Their daily routine is split into two phases. From 6am to 9pm, they survey a 20-kilometer radius of forest every 15 minutes with their telescopes. After 9pm, they conduct hourly checks, making sure to record even the most minute details. It is a tedious task to be sure, but it is also one of the gravest importance.

刘军: 你好, 我是月亮山, 一切正常。

Liu Jun: Hello, this is Moon Mountain Watchtower. situation normal.

这样的日子, 刘军夫妇已经重复了14年。

Liu Jun and his wife have adhered to this routine for 14 years.

**刘军采访**:以前都是叫做望火楼了,后来咱们林木都长大之后,被风一吹就像海浪一样,后来就把它改成望海楼了。我是 2008 年走向的瞭望员岗位。当时是小光顶瞭望员退休,也是根据工作需要吧,我和王娟便走向了瞭望员岗位。

Liu Jun:It was once called the "fire watchtower". However, as our trees grew taller and began to sway like waves in the wind, we decided to rename it the "sea watchtower". i became a fire surveillance forester in 2008. When the fire surveillance forester from the Xiaoguangding Watchtower retired, Wang Juan and I assumed the responsibilities as our duty.

望海楼上的瞭望员,被称作林海的眼睛。在塞罕坝的百万亩林海中,共有9座望海楼矗立在林场的各个制高点,由包括刘军夫妇在内的8对夫妻值守,他们大多都是林二代。这份工作看似不算劳累,但时时刻刻的小心谨慎,经年累月的重复与单调,加上严冬凛冽的风雪,

对每个人都是一种残酷的磨炼。

The fire surveillance foresters are often referred to as the "eyes of the forest." There are nine separate watchtowers within the hundreds of kilometers that make up Saihanba. Each is operated by a married couple, most of whom belong to the second generation of foresters. The task may appear simple, but the meticulous attention to detail, years of repetitive routine and harsh winters make for a grueling test of mental endurance.

赵福州采访: 八几年那会儿雪挺大,第一个望火楼那会儿建筑相 当矮,两间石头垒的。一个是寂寞再一个交通又不那么便利。

Zhao Fuzhou:In the 1980s,it snowed frequently.The initial watchtower was made of stone and consisted of only two rooms.We persevered despite the isolation and limited transportation.

陈秀玲采访: 跟他结婚三天我俩就上这儿来了, 我还寻思望火楼 是个好地方, 去吧, 一上来我就心发寒了, 一上来我就心里发冷了。 我说妈呦, 这地方无人烟的, 那时候道特别窄, 就一个小马车的道。

Chen Xiuling:We came here three days after our wedding.I had envisioned the watchtower to be something marvelous.However when I got here,my heart went cold. i was shocked at how desolate it was. Back then,the path was only wide enough for a small cart.

**刘军采访**:最难的时候也就是冬季大雪封山吧。2014年吧我那个下去采购物资的时候下大雪,结果等我采购完之后雪下大了回不来了,把我截到山下三天,王娟自己在山上坚守了三天三夜。

Liu Jun: The most challenging times are probably in winter when the snow seals off the mountains. In 2014. when I went down the mountain to

buy supplies it snowed heavily. When I was returning. The snow had intensified, so I was forced to stay at the bottom of the mountain for three days while Wang Juan worked in the watchtower.

纪实: 刘军和王娟用望远镜瞭望第二代望火楼

刘军: 你看咱们现在小光顶有变化了没

Liu Jun:Do you see any changes to the Xiaoguangding Watchtower? 同务林人的更迭换代一样,望海楼也经历了三代的变化。

Thankfully the watched house have been renovated to be more accommodating to their residents.

王娟:比咱们原来那个生活区要大一点是吧?

Wang Juan: Has its living space expanded?

刘军:对,新盖的嘛,咱们俩那会儿多苦。

Liu Jun: Yes, just recently. It was much worse for us before.

2018年9月,刘军夫妇调到了月亮山望海楼,这时的望海楼已经是第三代了,通讯、供暖、补给,包括观测工具都已不同往日。

The couple was transferred to the moon mountain watchtower. By that time it had all the necessary equipment, supplies and living amenities that were lacking in previous years.

纪实: 刘军介绍新添置的罗盘与观测仪

刘军: 罗盘的方位角, 这会是 98 度。咱们从这个地方找到 98 度。 然后结合这个距离, 27 这块它的比例尺是 9.7 公里, 它正好是在二 道沟和半截沟的交界处, 能够准确地找出事故地点。

Liu Jun:The compass indicates 98 degrees.Let's find where that is,Considering the scale of the 27th section is 9.7km.it should be situated

at the intersection of Erdaogou and Banjiegou. This allows us to pinpoint the accident site.

纪实: 王娟做饭, 与刘军吃饭时的对话

王娟: 刘军

Wang Juan:Jun

刘军:哎!

Liu Jun: Yes!

王娟: 吃饭了。

Wang Juan: Meal is ready.

刘军: 好嘞!

Liu Jun:Alright.

(刘军边吃饭边向窗外瞭望)

王娟: 你先安心吃饭。

Wang Juan: Just relax and enjoy your meal.

刘军: 那哪行, 干的是啥, 万一出事儿呢, 瞭望着吧。

Liu Jun:How can I relax?What do we do if something happens?I have to keep watch.

王娟:这么多年了,我做的菜你吃腻了不?

Wang Juan: After all these years, are you finally tired of the food I cook?

刘军:不腻啊,那还能吃腻了,永远都不腻。

Liu Jun:Not at all, How could I be?I'll never get tired of it.

纪实: 刘军采花, 夕阳下送给王娟

刘军:送给你。

Liu Jun: This is for you.

王娟: 二十多年, 第一次收到你送我的花。

Wang Juan:In over 20 years.this is the first time you've given me flowers.

刘军: 野花。

Liu Jun: They're wild flowers.

王娟:野花也幸福。

Wang Juan: Wild flowers bring happiness too.

刘军:嫁给我后悔么?

Liu Jun:Do you regret marrying me?

王娟: 这儿的景色这么美, 看一辈子也看不够。

Wang Juan: The scenery here is so beautiful. I never get enough of them.

春去秋来的轮转,日日夜夜的守望,对于望海楼上的夫妻们而言,如果说相濡以沫是对抗孤独与寂寞的最好良方,那么看着自己守护的林子茁壮成长,就是他们最大的慰藉。

Having spent countless hours of vigil in a solitary tower overlooking a still and indifferent wilderness, the couple knows better than anyone what loneliness can feel like. However, because of their strong belief, proud sense of duty and love for the forest life is bearable.

**王娟采访:**看着自己守护的树苗一天天长大,就像看着自己孩子似的,你的那种感情不是说你用什么语言能表达出来,你看着这块小树长大,你感觉着幸福。

Wang Juan: Watching the saplings I've been tending grow day by

day.is like watching my child grow.It's hard to express the emotion I feel.Watching these little trees grow brings me such joy.

**刘军采访:**十四年了,我在守护着大山,她在守护着我吧。如果是让我再选择一次的话,我还会选择这个岗位。我父辈们辛辛苦苦把塞罕坝建设得这么好,我既然接过了他的接力棒,我也要尽职尽责吧,把这片林海看护好。

Liu Jun:For 14years. I've been guarding this mountain, and in a way it has been guarding me. Given the choice again would still choose to work here. My predecessors worked hard to build Saihanba. Now that the baton has been passed to me, I must fulfill my duty to protect this forest.

同期: 月亮山, 报平安, 一切正常。

同观测火情的望海楼夫妇不同, 阴河林场的森保股股长孙利革正 眉头紧锁, 焦急地关注着当天实时降雨情况。按照原计划, 今天是针 对亮兵台营林区的樟子松褐针病进行无人机防治的日子。如果持续降 雨, 防治工作不得不推延。一旦错过关键期, 病情将难以控制。

Sun Lige is the head of the forest protection unit at the Yinhe river division of the farm and is closely monitoring today's rainfall. Today he will be employing pest control drones to prevent the spread of brown needle disease in the forests, Mongolian scotch pines. However, if the rain keeps up, he may have to postpone the operation which could potentially make the outbreak even more challenging to manage.

**孙利革采访:**森林病虫害是一个无烟的火灾,这个病害初期不易发现,一旦发现的时候它就是一个爆发期,一到爆发期这个东西你再使药,效果几乎就是大打折扣,而且可以说是没什么效果。

Sun Lige:Forest pests and diseases are often described as "smokeless wildfires". They can be difficult to detect in their early stages and are often out of control by the time they are discovered, At that point any treatment is basically useless.

雨势稍小,孙利革果断决定与团队上山作业。

纪实: 孙利革开车带着药与无人机作业团队上山

**孙利革打电话:**杨师傅,咱今天早上看着天气不太好,这会儿天 气有所好转,咱们这个工作抓紧时间进行。

Sun Lige:Mr. Yang, the weather wasn't great this morning,but it's alright now.let's make the most of it.Let's go!

**孙利革**:这种病害与当地的气候、气温还有降水量有极大关系。它是在高温高湿的情况下发生、发展最迅速、最快。所以说在这个真菌的孢子没有扬飞前,赶紧把防治工作做了。到咱们防治作业地块了,这半拉和这边一样,为了我们便于观测防治效果,留了一块对照地。

Sun Lige:This disease is due to the local climate,temperature.and precipitation.It develops rapidly under high temperature sand humidity.so it's crucial that control measures are implemented before the spores from the fungus disperse into the air. This is our pest control operation site, and this section mirrors the other one. We have designated a control area where we monitor the treatment's effectiveness.

300 亩的作业区,只需无人机 15 架次,3 个小时作业时间就能完成。这样的效率,比之前的人工防治提高了不止十倍。

Takes 15 drones just 3 hours to cover 20 hectares of forest, which is 10 times more efficient than previous manual prevention methods.

纪实: 孙利革指挥无人机洒药, 介绍工作用的卫星系统

**孙利革:** 我们这个平板上山我们就带着它,这个能到某个地方能显示出我的位置,这个小蓝点就是。而且我们想要调查的林分,我们要看这个小班面积多大,我们一点它就出来。能知道它的面积、树种,在这个平板上一目了然。

Sun Lige:We bring this tablet up the mountain with us,Wherever I go my location is displayed as a small blue dot.When we need to inspect a specific section,we just tap on it and it immediately shows us the are a size and the tree species.

孙利革与无人机操作员依据卫星地图,确定好工作区域后,一场 与天气的对弈开始了。

Using a satellite map, Seneca and the drone operator identify which area they will cover, hoping the weather cooperates with them just long enough to Complete their task.

孙利革:把这个高度控制一下,风大了就刮跑了。

Sun Lige: Lower the altitude.

然而,坝上的气候总是爱和这里的务林人开玩笑。就在防治工作接近尾声的时候,孙利革最担心的状况出现了:一场雨不期而至。如果打药后两小时内有大量降雨,这次的防治工作将功亏一篑。

Just as the operation is nearing completion, Sun Lige's worst fears come true. Rain, it's disheartening to say the least, because if it continues, the entire effort will be put in Jeopardy. There's nothing to do now, but wait.

纪实:工作人员纷纷避雨,孙利革车中避雨表达担忧

**孙利革:**这地方气候特点就这样,有块云他就有雨。但愿它别下了,对防治有很大影响,赶紧过去吧。

Sun Lige:We don't want.the wind to take it.The weather here is unpredictable.hope it stops soon,as it could impact our pest control,Let's hope it clears up quickly.

所幸,这场雨只下了几分钟。雨过天晴,孙利革一扫愁容,招呼 大家开始收尾工作。

Luckily the rain only lasts a few minutes giving sun lige and his team a chance to wrap up their work.

**孙利革:**杨师傅,来咱们开始,这雨也过去了,没事了。就这点小雨,影响不大,要不就白打了。

Sun Lige:Mr. Yang, let's get back to work,the rain has passed, so we're good to go now.It's good that it was brief,otherwise our efforts would have been in vain.

当无人机完成了最后一架次的洒药任务后,孙利革终于松了一口气。即将年满 60 岁的他,今年可能是在林场工作的最后一年了。临近退休,他无比珍惜每一次工作机会,对林场最新的防治技术也是更加认真地学习。

When the drone completes its final pass, Sun Lige can finally relax almost 60. Now this could be his last year at the forest farm. With retirement on the horizon. He cherishes these last few opportunities to make a difference.

# 纪实: 孙利革介绍林场的物联网防虫害基站

孙利革:这个叫物联网智能监测站,就是监测这个森林病虫害发

生发展趋势的一种设备。昆虫都有趋光的习性,通过管道掉进收集盒里头,收集盒上面有一个高清的摄像头,它把所下来的昆虫通过高清摄像头拍成影像,通过 4G 网实时传输到上面这个平台,就能鉴定出这个蛾子是什么蛾子。

Sun Lige:Insects are drawn to the light and then fall into the collection box through this tube, then a high-definition camera transmits the images in real-time via the 4G network to our platform allowing us to identify specific moth species.

**孙利革采访:** 现在越面临退休这块越感触特别深。四十多年的工龄,四十多年的林场发展,就是说整个历历在目。因为这片林子养育了我,你说我能对他没有感情吗?

Sun Lige:Nearing retirement,I'm overwhelmed with emotion Having served for over 40years and witnessed the evolution of the forest farm.I have so many vivid memories.This forest has nurtured me.How could I not feel a deep attachment to it?

# 纪实: 孙利革与徒弟调查病虫害

孙利革:今天咱们所要调查的林子呢,就是这块儿。这个树是樟子松,咱们调查的是樟子松病害。正常的松针应该是绿色的,你看这个松针底下变色了,变成这个红褐色了。

Sun Lige:Today we're inspecting this section of the forest. This is a Mongolian pine and we're studying its disease A normal pine needle should be green, but the base of this needle has turned reddish-brown.

**孙利革采访:** 平时他们也是说,他们说到时候你走了谁干,我说没事这个放心,如果说需要的话,我仍然可以是义不容辞地在防虫的

节点的时候, 我回来可以协助搞这项工作, 而且这个事, 责无旁贷。

Sun Lige:People often ask me,"Who will do the work when you leave?"I tell them,Don't worry.If need be, I'll come back during the pest control season to help.This is my duty.

# 纪实: 哨声响起, 扑火队员集合跑步

早上六点半,随着集结哨的吹响,塞罕坝森林防火指挥中心的灭火队员们开始了一天训练。带队的就是孙利革的儿子,孙子恒。作为林三代,从小的耳濡目染,让他无比理解父亲口中的,责无旁贷。

At 6:30am firefighters at the Saihanba forest fire command center begin their daily training. Their leader is Sun Ziheng, the son of Sun Lige. As a third generation forester, he too has been instilled with a profound sense of duty.

**孙子恒采访**: 好像是一年秋天,晚上11点多了吧,我们因为跟周边的农村营子相连,他们有一个草垛着火了,男女老少上到七八十岁的老头老太太,下到像我这么大的孩子全都出去了,手里每个人都会拿着一个工具,大铁锨拿不动,我拿小铁锨,小铁锨拿不动,我拿树枝子。反正总是有那种意识,可以说全民备战,然后全民都在防火。

Sun Ziheng:One autumn night at around 11pm,a haystack in a neighboring village caught fire. Everyone, from seniors in their seventies and eighties to young people my age rushed out to battle the flames. Each of us grabbed something whether it was a shovel or a tree branch. The entire community answered the cal to fight the fire.

防火,就像一粒种子从小埋在了孙子恒的心里。2015年,从部队退伍的孙子恒回到了塞罕坝,加入了塞罕坝机械林场森林消防大

队。他所驾驶的是一辆3吨远程高压消防车。由于林地道路曲折,这款机动性较强的消防车成为山林灭火的主力。

Fire fighting was deeply ingrained in Sun Ziheng heart from an early age. After retiring from the military in 2015, he returned to Saihanba and joined the forest farms fire brigade. One of his duties is operating a three ton fire truck, equipped with a long range water hose. It's an extremely important responsibility that sun doesn't take lightly.

**孙子恒采访:**每个防期的时候,都会每天例行检查自己的车辆。 我是一个消防驾驶员,他是我的消防车,就相当于我是军人,他是我 手中的钢枪。战士拿钢枪上战场,我带着消防车去火场是一个道理。

Sun Ziheng:During the fire prevention season carry out daily inspections of my vehicle. As a firetruck driver consider my truck to be as important as a soldier's rifle. Just as the soldier takes his rifle into the battlefield, I take my truck to the fire.

检查完车况和装备,孙子恒和战友换上防火服,准备进入林区针 对远距离火情开展水带铺设的训练。

After inspecting his vehicle and equipment Sun Ziheng and his colleagues don their fire fighting suits and stand at attention for their morning drills.

#### 纪实: 孙子恒布置训练任务

孙子恒:看右看齐,向前看,稍息。今天上午训练的科目,水灭。 主要使用3吨消防车,用水管咱们上山。要求有两点,第一点咱们动 作迅速一些,上山咱们达到人到水出,第二点咱们注意安全。向右转, 跑步走。 Sun Ziheng:Attention!Ease!Today's morning drill will focus on extinguishing fires with water.Well be using our 3-ton firetruck and be carrying hoses up the mountain. We have two main objectives:first,to be fast.ensuring the water is ready promptly upon arrival.second,to keep safety as our top priority.

当火线比较容易接近时,扑火队队员们会利用 15 吨消防车上的水炮将火点打散。而如果火情位于消防车难以到达的位置时,水带的架设速度与长度无疑成为制胜关键。

when the procession gets to the training zone, firefighters test out the high pressure water cannon mounted on the back of the trucks. However, when a fire breaks out in a location, the truck can't reach, the hoses must be unraveled, connected and laid as speedily and efficiently as possible.

#### 纪实:水带架设训练

孙子恒:之前是架设那种水泵,用水泵从水囊里吸出来的水,然后再出去灭火。就是我们现在训练加管,它可以接四五公里。比如一座山山顶着火,我们是人背着水带铺着水带上山,然后人到山上水出,比之前快了很多。

Sun Ziheng:We used to set up pumps that would extract water from tanks to extinguish fires.Now,with our new hose system,we can cover distances up to 5km.If a fire occurs on the mountain.we can bring our hoses all the way to the top.So,water is much more accessible than it was before.

一年里有三百多天都驻守在岗位,孙子恒与家人见面的机会少之 又少,就连与同在林场工作的父亲,见面基本都是偶遇。

On duty for over 300 days every year, Sun Ziheng rarely has the opportunity to see his family. even encounters with his father who also works at the forest farm are uncommon.

**孙子恒采访:**一个多月之前了吧,我开巡逻车我去巡逻,然后他是去上总厂去拉药,拉那些防虫的或者防鼠害的药,然后在转盘上我看见他,他看见我,我把车停下了,我问他我说你干啥来了?我拉点药,他说你呢,我说我巡逻去,就这一面,这两三个月就见这一面。

Sun Ziheng:About a month ago, while I was on patrol in my vehicle saw my father heading towards the main site.I pulled over and said, "What brings you here? He said, "Just picking up some pesticides. And you?" I replied, "I'm on patrol." That brief moment was the only interaction we had in the past few months.

**孙利革采访:**希望他呢, 牢记他爷爷这辈人还有二代护林人他父亲父母这辈的付出, 牢记塞罕坝精神, 干一行爱一行, 干出成绩来, 在自己的工作岗位上发挥自己应有的作用, 对塞罕坝的发展做出自己的贡献, 也不负老一辈对他们的期望。

Sun Lige:I hope he remembers the dedication of the first and second generations of foresters and upholds the Saihanba spirit.I hope he loves his work contributes to the development of Saihanba.and carries on the hopes of previous generations.

爷爷种树,父亲防虫,儿子防火。三代人,正如一个完整的链条, 在塞罕坝肩负起了各自的使命与职责。 His grandfather planted the trees, his father protects them from diseases and pests. Now he protects them from fire three generations like links in the chain. all inextricably connected to the fate of Saihanba.

**孙子恒采访:** 人都说前人栽树后人乘凉,前人树栽好了,我们不仅要乘凉,而且要把它守好护好。就像他们上两代人创造了这片林子, 而我们第三代人要护好这片林子,去替他们守他们这辈子的心血。

A saying goes, "One generation plants the trees, while the next enjoys the shade. But even though we live in the shade it's our duty to safeguard and nurture these trees. As the third generation we are entrusted with preserving this forest and carrying on the legacy of those before us.

孙子恒所在的防火指挥中心,承担着塞罕坝整个林区的火灾预防 以及扑救任务。而除了负责火灾扑救与日常巡护的森林消防大队,林 场还有一个集合着多种预警系统的指挥中心,担负着林区的火灾预警 监测工作。

Sun Zhiheng's command centre is responsible for fire prevention, fire fighting and carrying out daily patrols across the Saihanba forest farm. There is also another command centre that specializes in early warning systems and fire monitoring.

纪实: 塞罕坝森林防火指挥中心, 亮兵台监控出现黑屏。

段崇岩:"喂, 你好"

Duan Chongyan:hello?

指挥中心:"崇岩,亮兵台监控点视频出现掉线。"

Commander Center:Chongyan, the video feed from the Liangbingtai monitoring point is offline.

段崇岩: "好的, 我马上去处理。"

Duan Chongyan:OK. I'll get on it.

纪实:段崇岩开车上山

段崇岩:咱们去的这个点位上面主要设备是视频监控和雷达还有 图传中继,咱们今天要去这地儿是车能到的地儿,还有好多一半以上 是车到不了的地儿,全靠人爬。

Duan Chongyan: The monitoring point we're heading to houses equipment for video surveillance, radar and image transmission relay. This one is accessible by vehicle but more than half of the others can only be reached on foot.

段崇岩,防火指挥中心技术员,负责指挥中心雷达、雷电预警、视频监控等系统以及山上前端设备的保养和维修。从 2014 年参加工作起,段崇岩已经历了三代指挥中心,视频监控点位也从开始的 6 个增加到如今的 43 个,覆盖率达到了 97%。

Duan Chongyan,a technician at the Fire Command Centre,is responsible for maintaining and repairing the radar,lightning warning systems, video surveillance systems and front-end devices in the mountains. Since 2014, he has witnessed the evolution of three generations of command centers. Today, there are 43 monitoring points spread across Saihanba which allowed the team to effectively surveil 97% of the forested area.

纪实:段崇岩与同事登上亮兵台望火楼检查没有图像原因。

段崇岩: 你看现在它不是有这个花屏, 因为咱们现在这个传输刚才看了是负 81 到 86, 数据传输率低的话, 所以它会花屏, 咱们调一下传输信号率。现在这个画面有了, 跟指挥中心说一下吧。

Duan Chongyan:Our transmission rate is fluctuating between-81and-86. That's what is causing the white noise. We have to adjust the signal rate. The screen is back, Let's notify the command center.

段崇岩: 喂,指挥中心,现在已经维修完毕,你看一下图像是否已经回传。

Duan Chongyan:Hello,command center.The repair is complete. The repair is complete.Please confirm if the image has been restored,The button on the left is reset

这些矗立在制高点的摄像头,单机探测半径达到 10 公里。搭载可见光和热成像的双光镜头,24 小时对整个林区进行不间断监控。 为了提升监控的准度与效率,2019 年指挥中心购置了 8 架无人机,组建了一支无人机中队。段崇岩在第一时间学会了无人机的操作,并将技术与同事分享。

The cameras, which have been strategically positioned at different vantage points, have a detection radius of up to 10 kilometers. Equipped with dual lenses for visible light and thermal imaging, they ensure round-the-clock surveillance over the entire forest area. Then, in 2019, the Command Centre welcomed yet another addition - a squadron of eight drones capable of even more accurate real-time monitoring.

# 纪实: 段崇岩与同事的无人机教学

段崇岩: 左手下这个是一个复位按钮, 然后右手这个是播放, 这个是拍照。你可以听到拍照的声音。

Duan Chongyan: The one on the right is for playback, and this one is for taking photos. You'll hear clicks when it takes a photo.

**段崇岩采访:**有的时候摄像头覆盖不到的地方,你这摄像头是平扫平射,咱们这无人机你可以垂直看一下。六旋翼的无人机主要是能搭载双光镜头,对那个不能看见的火,可以用热成像去扫一下,看一下有没有余热什么的,然后这个八旋翼的可以抛投,可以喊话。

Duan Chongyan: Cameras can overlook certain areas due to their limited horizontal view, where as our drones offer a vertical perspective. Our hexapod drones are equipped with dual lenses and thermal imaging capabilities, enabling them to detect concealed fires and residual heat Our octopus drones serve purposes such as communication and item transport.

在塞罕坝的上空,除了实时巡护的无人机外,还盘旋着 11 颗卫星。每半个小时都会有一颗卫星过境,对整个林区是否有热点进行全面扫描。针对坝上夏季频繁发生的强对流天气,为了消除雷击火的隐患,中心同时配备着一套精准的雷电预警监测体系。

From space,11 satellites provide constant surveillance of the area. Every 30 minutes a satellite scans the entire forest for heat sources because of the frequent occurrence of thunderstorms during summer. The center also employs a precise lightning warning system.

指挥中心彭志杰主任介绍:落雷点接近边界 10 公里,强度超过50 千安以后呢,系统会以短信的形式提示咱们工作人员,发送到咱

们工作人员的手机上,然后提示咱们的瞭望员以及咱们指挥中心后台工作的人员对落雷点进行核实,是否发生火灾。

Peng Zhijie:When a lightning strike surpasses 50kA and is within 10km of the boundary.our system sends an alert to our staff's mobile phones. This informs both our fire surveillance forester and the command center to verify the strike location and assess if a fire has been ignited.

卫星、无人机、探火雷达、视频监控、高山瞭望等组成的"天空地"一体化森林草原防火预警监测体系,如同一面牢固的盾牌,守卫着塞罕坝林海的安全。而在这环环相扣的链条中,地面巡护是必不可少的重要一环。

Satellites, drones, fire radars and video monitoring, complemented by high-altitude watchtowers, form a comprehensive sky-to-land fire prevention network. This system acts as a protective shield for the Saihanba Forest Farm, with ground controls being a vital component within this interconnected chain.

### 纪实: 弯弯沟营林区布置巡护任务

护林员:今天次仁上水草台子防护,王国华上西塔顶子防护。

次仁旦巴,北曼甸分场弯弯沟营林区的一名护林员。2021年, 西藏大学林学专业毕业的他,通过了河北省就业援藏事业单位的考 试,他告别新婚妻子,穿过大半个中国,选择来到了距离家乡 4000 多公里的塞罕坝。初到工作岗位,眼前的景象让次仁感到无比新奇。

Tsering Tenpai, a forestry major of Tibet University,is currently serving as the forest ranger for the Wanwangou Forest District. After successfully passing the staff recruitment exam in Hebei Province, he

bade farewell to his newlywed wife and travelled over 4,000 kilometers across China to Saihanba. Even though he has seen his fair share of heavenly landscapes in Xizang, he was still captivated by the majesty of the forest here.

次仁旦巴采访: 我老家没有这么多的树,大部分都是草原。当我看到这边这么多树的时候,让我特别震撼。以前塞罕坝机械林场先辈们付出了多少努力,才变成如今这片林海。

Tsering Tenpai:In my hometown,we have fewer trees and mostly grasslands. Seeing such an abundance of trees here is truly astonishing. It's evident that the older generations of Saihanba made significant efforts to establish the expansive forest we see today.

每天巡逻 10 公里左右,驱赶进入林中的牲畜,询查过往车辆有没有带火种,宣传森林防火条例。这份看似简单的工作,却承载着林区防火、森林保护的重要职责。

He patrols approximately 10 kilometers daily, driving livestock away from the forest, inspecting passing vehicles for potential fire sources and carrying out other forest fire prevention protocols. It can be tedious work.

次仁旦巴采访:第一次去的时候有点紧张,刚开始我把举旗,然后一个车停下,刚开始跟他说话,你好,进了林场不能抽烟,不能携带打火机之类的,你有打火机交出来的时候,我那个声音是抖的,我的脚也特别抖。

Tsering Tenpai:My first day on duty, I was nervous.waved my flag to stop a car When I informed them that smoking and carrying lighters were prohibited and they had to turn them over my voice was quivering and my legs were shaking.

一年半的时间,次仁护林员的工作变得得心应手,就像他在这里种下的第一棵树一样,在塞罕坝的土地上,次仁与这片林子共同成长,他学会了很多林业知识。

A year and a half later, Tsering Tenpai feels much more settled in his role. Ever since he planted his first tree, he became one with the Saihanba forest and their fates were intertwined forever.

#### 纪实: 同事教次仁打样地、测量树的胸径

王国华:看准了,以一米三为(高度测)直径就行。然后你就开始量这棵树,看有多少了。

Wang Guohua: Make sure to measure the diameter accurately at a height of 1.3m, then measure the diameter of this tree.

学会了在枯燥的工作中,发现其中的乐趣。

Over time, Tasering has learned to find joy in even the most mundane tasks.

纪实: 次仁丹巴与爱人通话

妻子: 你在那边过得怎么样?

wife: How are things going over there?

次仁旦巴: 过得挺好的。认识这个花么?

Tsering Tenpai: I'm doing well. Do you recognize this flower?

妻子: 不认识。

wife:no.

次仁旦巴:这个花叫金莲花。

Tsering Tenpai: It's called a troll flower.

妻子: 那你下次过来的时候给我带一些吧。

wife: Then bring some home for me next time.

次仁旦巴: 好嘞。

Tsering Tenpai:No problem.

#### 纪实:写金莲花的诗

次仁旦巴(独白): 我最喜欢的还是塞罕坝的金莲花。因为它有 一个崇高的理想,让百万亩荒漠沙地变成绿水青山的理想。

Tsering Tenpai:My favorite flower in Saihanba is the troll-flower,It symbolizes the noble ambition of transforming hundreds of square kilometers of deserts into clear waters and lush mountains.

次仁旦巴采访:金莲花在高原环境上生长,它坚韧不拔的精神跟我们塞罕坝先辈们坚韧不拔的性格特别像,所以我特别喜欢金莲花。

也更加理解了这百万亩林海的来之不易。

Tsering Tenpai:It grows on the plateau,and its tenacious spirit is similar to our Saihanba predecessors.which is why I am so fond of it.

次仁旦巴采访: 将来有机会回到西藏的话, 这边学到的知识回馈 给我的家乡。我家乡没有那么多的树, 到了冬天我家山顶是光秃秃的 那种, 然后我想变成那种林海, 把塞罕坝的精神带到西藏, 发扬光大。

Tsering Tenpai:If given the opportunity to return to Xizang.I will use the knowledge I've acquired here to do something in my home town.Currently,our mountains are barren in winter.My goal is to introduce a forest inspired by the Saihanba spirit and promote it throughout Xizang.

# 纪实: 次仁旦巴与同事的对话

次仁旦巴: 这是我和我媳妇的结婚照, 在布达拉宫。

Tsering Tenpai: This is my wedding photo taken at the Potala Palace.

刘斌:这是布达拉宫。

Liu Bin: This is the Potala Palace.

次仁旦巴:对。

Tsering Tenpai:yes.

刘斌: 真好看. 媳妇用藏语怎么说呢?

Liu Bin:It's beautiful.How do you say "wife" in Tibetan?

次仁旦巴: 媳妇用藏语来说

Tsering Tenpai:

刘斌: 那塞罕坝用藏语怎么说?

Liu Bin:How do you say"Saihanba"in Tibetan?

次仁旦巴:

Tsering Tenpai:

刘斌:这是什么意思

Liu Bin: What does that mean?

次仁旦巴:美丽的高岭。

Tsering Tenpai: Majestic highland.

在这美丽的高岭上,不论工龄的长短,或是岗位的不同,不论是来自本土或是他乡,每位塞罕坝务林人,都将奉献的信念深深地融入了这片林海。它是父辈或自己青春的见证,是朝夕相处、共同成长的伙伴,更是甘之若饴的毕生事业。一代人有一代人的使命,一代人有一代人的担当。纵然有着各自际遇和挑战,塞罕坝精神始终一脉相承,百万亩林海就是他们的星辰大海。

The Forest Regardless of their length of service, roles, or how far away they are from home, every forester fulfills their duty with the same dedication a parent would give to their own children. The forest stands as a testament to the efforts of both present-day foresters and their predecessors, and its guardians today are as stoic as ever.

对塞罕坝的未来,这里的每一代务林人都曾有过各自的畅想。如果说改造荒漠是创业者的初心,平安无恙是守望者的希冀,那么绿色 发展则是新一代塞罕坝人对这百万亩林海未来的追寻。

In 1962. the Chinese government established a mechanized forest farm in Saihanba of Hebei province, hoping to cover the barren land with trees as far as the eye could see. It worked. And since then, every successive generation has carried that legacy forward, guarding the precious woodland with pride and diligence.

"再接再厉、二次创业,在实现第二个百年奋斗目标新征程上再建功立业。"进入新时代的塞罕坝务林人,牢记习近平总书记的嘱托,攻坚造林、森林经营、生态保护、民生改善,在"二次创业"的新征程上,塞罕坝正阔步向前。

We must redouble our efforts in the second phase while making further contributions on the new journey towards the second centenary goal. Heeding the words of president Xi Jinping, the Saihanba foresters have marched once again into a new era by overcoming the challenges of a forestation forest management, ecological protection, and improving people's livelihoods. Saihanba is poised to do exactly that.

# 第三集《兴林》

# Part3 Fostering Prosperity

这里是塞罕坝机械林场马蹄坑营林区。1964年,塞罕坝第一代 务林人在这里成功开展大规模机械造林,打破了植树不活的技术壁 垒,成为百万亩林海的起点。也正是在这里,第三代务林人攻克了在 石质阳坡上造林的世界难题,塞罕坝绿色版图中遗留的黄色斑块正在 被逐一抹去。

In 1964, the first generation of foresters at the Matikeng forest area, shattered technological barriers with large scale mechanized deforestation. This event marked the birth of this sprawling forest land. Now, the third generation has grabbed the reins determined to take Saihanba to new heights. It should come as no surprise that the few sandy sections that remain from the previous generation have now transformed into vibrant green landscapes.

在这处坡度达30多度的石坡上,千层板分场的技术员王雪萌与施工员丁攀宇正在对这片区域的樟子松树苗进行自检。

Today, technician Wang Xuemeng from the nearby forest district and her colleague Ding Panyu are conducting an inspection of scotch pine saplings.

纪实: 技术员王雪萌和施工员丁攀宇在石质阳坡生产自检

王雪萌:咱们拉30米行吗?那再走走,再走两米。可以了,往回来一点。

Wang Xuemeng:Let's take it 30 meters, Keep going, 2 more meters, OK, back a bit.

丁攀宇: 25米,5行。

Ding Panyu:It's25m,5 row.

王雪萌: 多少裸?

Wang Xuemeng: How many saplings?

丁攀宇: 我这边是 25 裸。

Ding Panyu: There're 25 on my side.

王雪萌: 有伤苗么?

Wang Xuemeng: Any damaged ones?

丁攀宇:没有,咱们再往上拉一绳吧。

Ding Panyu: No, none on my side either. Shall we keep going?

王雪萌:行。

Wang Xuemeng:ok.

丁攀宇:上面的话, 我看有的地方有空场的, 咱们适当要进行补植。雪萌咱们看看刚才拉这几绳, 测一下咱们这个成活率怎么样?

Ding Panyu: There're some empty spots further up, We might need to replant. Xuemeng, why don't we assess the survival rate for the sections we measured?

王雪萌:刚才这两绳成活率还是挺不错的,都能达到98%。

Wang Xuemeng: The survival is quite good, 98%.

施工员:合格了,那我两个还比较欣慰。

Forest ranger: That's good. We're both quite relieved.

王雪萌:辛苦你们了。

Wang Xuemeng: Thanks for your hard work.

王雪萌采访: 大规格整地, 就是采取 70×70×40 的大穴, 再由 人工将穴内的石块取出摆于穴下沿, 为了防止水土流失。我们采用的 苗木也是 2+2 的樟子松大容器苗。由于山上土层比较薄, 土壤贫瘠, 所以要由人工下山找到优质的土壤, 把它背到山上再进行回填。在造 林完成后, 将穴面整理成聚水盆的形状, 然后再进行覆膜, 这样可以 起到保墒蓄水的作用。

Wang Xuemeng: We dig 70x70x40cm holes.remove all the rocks and stack them along the lower edge of the pit to prevent soil erosion. We use large 2+2 container seedlings of Scotch pine, Given the mountain's shallow soil layer we manually transport top-quality soil for back filling. After afforestation, we dig a basin in the soil so it will collect water and apply mulch to retain soil moisture and conserve water.

塞罕坝机械林场副场长于士涛采访:攻坚造林这一块可以说我们从试验开始,从试验取得成功,到大面积推广一直到现在,基本上已经造严了,将近10万亩地。这些林子成活没问题,现在看成林也没有问题。等这一批林子进阶到能算森林覆盖率以后,最后能达到120万亩,属于一个86%的森林覆盖率的一个饱和值。

Yu Shitao:In tough conditions,we've transitioned from the initial experimental phase to large-scale implementation. We have effectively covered approximately 67 square kilometers of land with thriving forests. As they mature and contribute to the overall forest coverage, our goal is to achieve a total afforestation area of 800 square kilometers resulting in a forest coverage rate of 86%, the saturation rate.

## 纪实: 王雪萌检查自己种的树苗成长情况

王雪萌: 喂,股长。我在咱们今年烟子窑林冠下造林这块呢。咱们桦树这块我发现有虫子,我把照片发给你了,你看看。

Wang Xuemeng:Hello,Chief,I'm currently in the Yanziyao area where we worked this year.I've observed some pests on our birch trees and have sent you a picture.Please take a look.

王雪萌:现在看到的这棵树苗是桦树树苗,是我们这片落叶松林子下的林冠下造林,也是我们今年春天才完成的造林项目。这片林子底下不仅有桦树树苗,还造了云杉和落叶松,现在这些小树苗已经在这片土地上生长了几个月了。

This is a birch seedling planted beneath the canopy of the larch forest. This afforestation project was completed this spring and includes birch, spruce, and larch seedlings which have been growing for several months now.

现在可以看到这株小树苗其实是落叶松。我们抬头能看到现在是成片的这种成熟的落叶松成林,在落叶松成林下栽植落叶松的小树苗呢,是为了形成这种在同一片林子里同树种异龄林。这样也是为了丰富森林结构。

Looking up you'll see mature larches, By introducing younger trees beneath them we're nurturing a single-species, uneven-aged forest and enriching the diversity of the forest ecosystem.

建场以来,塞罕坝机械林场以落叶松、樟子松和云杉三大针叶树 种为主。单一的树种结构存在病虫害、火情难以控制等隐患。

Since its inception, the Saihanba forest farm has primarily focused on three main coniferous tree species, large scotch pine and spruce. However, this mono culture approach can elevate the risks of pests, diseases and uncontrollable fires.

为提高森林稳定性与安全性,继攻坚造林之后,塞罕坝机械林场将营造混交林作为当下和未来的重点。2022年,林场已在林冠下造林 6657亩,以人工纯林为顶层,灌木、草、花、次生林的复层异龄

混交结构将逐渐形成。

To improve forest stability and safety. The forest farm has prioritized mixed forestation for now and the foreseeable future. In 2022, the farm initiated its under canopy a forestation, covering an area of almost 4.5 square kilometers. Over time, this approach will blossom into a multilayered, mixed structure with man made forests at the top, complemented by shrubs, grass, flowers and secondary forests below.

营林科副科长常伟强采访:随着这个时代在发展,林场的生态定位在发生改变,林场作为京津的北方的一个重要的生态屏障,它的下一步的经营目标就转化到培育一个健康稳定可持续的森林生态系统,是我们未来经营的一个主导方向。培育这种近自然的异龄的一种混交林,让林分有一定的抗逆性,有一定的自我演替的能力。

Chang Weiqiang:As this era progresses,the ecological role of the farm is evolving.Positioned as a crucial ecological barrier north of Beijing and Tianjin,our next objective is to foster a healthy and stable forest ecosystem.Our primary direction for the future is to cultivate a mixed-age,mixed-species forest to ensure its sustainability.

# 纪实:河北农大教授刘强与学生在自然保护区样地布置任务

刘强:今天的任务就是,针对于我们 2020 年布设的四块标准地进行一次复测。复测的内容包括,地上乔木的个体属性,比如说胸径、树高、冠幅,地表植物多样性包括植物的种类,每一种植被的地径、盖度,平均高。

Liu Qiang:Our task today is to remeasure the four standard plots we established in 2020.We'll assess individual tree attributes including their

diameter at chest height, height, and crown spread. Additionally we'll evaluate ground cover plant diversity their species, ground diameter, coverage, and average height.

刘强,河北农业大学林学院副教授,2019年东北林业大学博士毕业后,来到了河北农大任教,并在当年跟随课题组来到塞罕坝进行森林经营研究。今天,他们来到位于千层板分场自然保护区的实验地采集数据,目的是研判不同采伐强度对于森林质量各方面的影响。

Associate professor Liu Qiang began his research on forest management in Saihanba after completing his PHD in 2019, and assuming a teaching post at the college of forestry at Hebei agricultural university, currently, he and his team are collecting data from their experimental plots located within the natural conservation area of the Qiancengban forest district. Their goal is to comprehend how varying logging practices impact forest quality.

### 纪实: 打样地、测量树木高度、胸径

河北农业大学学生:这棵树的胸径为22.7(公分)。往样地外走一走,先走到二十米的位置。

Student: This tree has a diameter at chest height of 22.7cm, walk further down Stop at around 20 meters.

刘强:目前来看这个金露梅的盖度占比应该是8%左右,记住8%就可以了。

Liu Qiang: As of now, the coverage of this bush counterfoil should be around 8%. Just record 8%.

刘强采访: 因为这个团队就是森林经营学科, 以森林经营为主,

那么来到塞罕坝机械林场,其实基于这个林场的特点,因为它百万亩林地几乎90%都是人工林,咱们现在关于人工林经营,比较倡导近自然演替、近自然经营,所以我们来这基本是针对人工林,如何加速它的自然演替而采取的这一系列经营措施。

Liu Qiang:Considering our team's emphasis on forest management, visiting Saihanba is of particular importance, since nearly 90% of it consists of man-made forests Our present approach underscores ear-natural succession and near-natural management. Therefore, our main goal is to accelerate he natural succession of these man-made woodlands through our various management strategies.

在这个全国唯一一家被批准在保护区内实施抚育间伐的实验地, 塞罕坝机械林场和河北农大团队将实验地分为四块,其中一块是作为 数据比对的保留地,另外三块实施不同的间伐力度。此时,刘强和林 场科研所长程顺来到了采伐力度最大的实验地。

This is the only location in china authorized to conduct tending and thinning experiments within a protected area. Collaborating with the Hebei agricultural university team, the forest farm has divided the experimental area into four sections. One serves as a control for data comparison while the other three carry out different degrees of thinning. Currently, Liu Qiang and the director of the forest farms research institute Cheng Shun are inspecting the section with the most intensive thinning.

#### 纪实: 刘强和机械林场科研所程顺在样地与保留地进行比对

刘强:采伐之前,这片林子的密度大概是每亩120株,现在采伐 完成之后保留的大概是50株左右。我们把林木每株单木它的营养器 官给它解放开,给它的生长空间解放开之后,对应的不仅仅它自己的光合能力会增强,林下透光多,那么底下这些植被陆续地也会长出来。这些植被枯死了之后,会反馈给土壤当中,那么会提高我们土壤当中这些养分含量,包括土壤当中一些微生物、土壤动物数量。这样的话会实现一种养分的循环。

Liu Qiang:Before the thinning,this forest had approximately 1,800 trees per hectare.After thinning,this number dropped to around 750 trees.Thinning stimulates the functioning of each tree's vegetative organs and provides room for growth.This not only enhances photosynthesis through improved light penetration but also nourishes the undergrowth.As the vegetation decomposes,it enriches the soil with nutrients necessary for establishing a nutrient cycle,for microorganisms.

程顺: 咱们在经营之前, 这棵树的胸径在多少?

Cheng Shun:Prior to management, what was the diameter of the chest height of this tree?

刘强: 20.9厘米。

Liu Qiang:It was 20.9cm.

程顺: 你带胸径尺了么, 再测一下现在有多粗。

Cheng Shun:Do you have the measuring tape?Let's measure its current thickness.

刘强: 22.6 (公分)。

Liu Qiang:2.6cm.

程顺: 1.7(公分), 这是一个特别大的变化数值。

Cheng Shun: It's grown by 1.7cm. That's a significant change.

刘强:首先胸径方面有变化,然后之前数据这个冠幅,之前是平均大概 3.5(米)左右,现在目测冠幅应该长了十几二十公分吧。

Liu Qiang:Firstly, the diameter at chest height has changed.Secondly, past data indicated an average.crown spread of approximately 3.5m.Now,the crown spread appears to have increased from 10cm to 20cm.

程顺:这是单木尺度的树高、胸径、冠幅三个指标都变化比较大。

Cheng Shun:There's a noticeable shift in tree height.diameter at chest height, and crown spread.

刘强: 咱们上那个对照区。

Liu Qiang:Let's proceed to the control area.

程顺:好,走。

Cheng Shun: Alright, let's go.

(两人来到保留地查看未经过抚育的林子)

刘强:现在咱们所处就是咱们没有经营的对照区。17(公分)。

Liu Qiang:We're currently in our control area, which hasn't undergone management, Its diameter is 17cm.

程顺:想想差好几公分响,多让人担心。这个树冠,冠幅这么小,冠长这么短,有些树已经到了濒危的状态。

Cheng Shun:The discrepancy is a few centimeters which is a concern, This tree has a noticeably small crown spread with limited crown length, Some trees are already vulnerable.

刘强:再一个地表,几乎没有什么草。

Liu Qiang:There's almost no grass on the ground too.

程顺:种类少,盖度低,生物量又太小。急需地扩大它的营养空间,让咱们的树长得更高、更粗、更好。让咱们保护区面积更稳定,功能性更强

Cheng Shun:With limited species, low coverage and minimal biomass.there is an urgent need to expand the nutritional space for these trees. This will enable our trees to grow taller, thicker, and healthier, ultimately enhancing the stability and functionality of our protected area.

随着大面积造林的完成,森林经营已成为新一代务林人的使命。 而营林的主要措施,一个是以造林的方式促进天然林更新,第二个就 是抚育与间伐。适度的间伐,可以为森林更新腾出空间,同时让森林 生态系统更加稳定,功能性得到发挥。

With the completion of large scale of forestation. The new generation of foresters has shifted their focus to forest management. The two primary measures include promoting natural forest succession through reforestation, and carrying out tending and thinning. Moderate thinning creates space for forest succession, stabilizing the ecosystem and enhancing its functionality.

程顺采访: 百万亩的林海,要在新时代得到一个高质量的发展,要突破传统的经营思路和经营思想,我们也是跟国内的一些著名的高校、专家,跟他们相互学习、相互沟通,相互交流,先后引进了人工林结构化培育,引进了次生林结构化培育,通过对森林的结构进行优化,进行密度的合理地配置,促进整个森林的结构更好,功能得到完美地发挥。

Cheng Shun:To ensure the woodland's development in the new era, we must move on from traditional management methods. We also share our knowledge and learn from leading Chinese universities and experts. We have introduced structured cultivation to both man-made and secondary forests. By optimizing the forest structure, we aim to enhance the overall forest composition and maximize its functionality.

2021年,刘强所在的团队在黄选瑞教授的带领下与塞罕坝机械 林场共同编制完成了《河北省塞罕坝机械林场森林经营方案 (2021-2030)》,为林场未来十年的营林方向提供了指南。

In 2021 under the leadership of professor Huang Xuanrui. Liu Qiang team collaborated with the Saihanba team to compile a 10 year forest management plan. With this comprehensive blueprint in place for the next decade, the forest farm is well equipped to handle almost any scenario that may arise.

**黄选瑞教授采访**:它1982年就编出了第一个经营方案。每十年一个经营方案,现在已经连续5期。塞罕坝为什么森林质量等等一代代能这样去做下去?首先它有它自己的抓手。塞罕坝现在的主要目标是什么,防风固沙生态的、碳汇,还有生物多样性的保护、木材生产。那么森林经营方案就是从宏观上解决了,特定的发展的时期,塞罕坝林业发展的定位。

Huang Xuanrui:Saihanba introduced its initial management plan in 1982 and has created a new plan every decade. This will be the fifth How does Saihanba consistently uphold forest quality across each generation? It's because of their strategic focus. Currently, Saihanba

prioritizes objectives such as windbreaks desertification control, carbon sinks biodiversity conservation, and timber production. So, the plan clearly defines goals for each phase of development.

纪实: 刘强与学生在工作室录入白天采集的数据

学生: 4.0 (公分), 空两个。

student: 4.0cm, skip two cells.

学生: 多少棵了呀?

student: What is the next one?

学生: 该第36棵了。3.7(公分)、3.0(公分)、4.8(公分)。

Student: What is the next one? The measurements are 3.7cm, 3cm, and 4.8cm.

晚上8点,完成外业的团队成员陆续回到他们在林场的工作室,进行数据录入,为后续的营林方案做参考。刘强在一旁为学生指点迷津。

At 8:00 pm after the field work, the team gradually returns to their workstations for data entry. The information they're collecting today will be instrumental for the implementation of the upcoming forestry plan.

刘强:尽量保证它是原始那个状态。

Liu Qiang:Try to ensure it remains in its original state.

夜深了,学生们完成工作后,刘强继续做着课题。在六十年前,包括东北林业大学前辈在内的第一代务林人夙兴夜寐钻研育苗造林。六十年后的今天,像刘强一样的新一代务林人正在森林经营上攻关克难,谋划着林场未来。

It's late evening and Liu Qiang is still immersed in his work.Six

decades ago. The first generation of foresters, including those from northeast forestry university, were conducting their own research on a forestation. Even today, Liu Qiang and others like him draw heavily from the work of their predecessors.

刘强采访:确实能够沿着老一辈林业人他们的足迹,继续在塞罕坝这儿开展一些工作,我觉得是一种传承。所以自己身上其实担子也很重,因为老一辈人已经把塞罕坝森林已经建设得很好了,我们在新时期可能会用一些新的方法,新的技术、新的手段,能够进一步提升咱们森林的森林质量,发挥咱们森林的多种功能,争取能够做出我们新一代的成果、成就,把我们塞罕坝及林场林区营造得更好。

Liu Qiang:Continuing the work in Saihanba and carrying forward the legacy of previous generation is a heritage I hold dear.I bear a profound responsibility given the exceptional foundation they established.In this new era,our goal is to employ innovative-methods technologies,and strategies to further enhance the quality of our forest,amplify its multi functionality and achieve new milestones along the way.

塞罕坝机械林场的最西端,四道河口营林区,塞罕坝机械林场保护地管理科科长丁伯龙和工作人员孙朝辉来到位于这里的野生动物通道,对安置在这里红外摄像机进行资料回收和维护。

Within the Sidaohekou section of the farm, Ding Bolong and another staff member. Sun Chaohui pay a visit to what is called the wildlife corridor. They're here to collect data from the infrared cameras. They've installed and check for any issues with the equipment.

纪实: 红外摄像机维护, 勘测动物足迹

丁伯龙:四道河口这布(置)了多少个相机?

Ding Bolong: How many cameras do we have in Sidaohekou?

孙朝辉:布了四个。

Sun Chaohui: There are four of them.

丁伯龙:以后咱还得再增加点。

Ding Bolong: We'll need to add more in the future.

孙朝辉: 是得加点,这个这次照了五百多张照片,都是狍子、野猪还有狐狸。这块狍子挺多的,天天顺着这边过来,这块都走出道来了。

Sun Chaohui:I agree.The cameras have captured 500 images including roe deer, wild boars, and foxes.There are a lot of roe deer here and they all use the same paths.

丁伯龙: 那就沿它走过的痕迹方向还得多布置点相机, 绑带没问题?

Ding Bolong:In that case,we should position more cameras along their routes.Are the straps secure?

孙朝辉:没问题。

Sun Chaohui:No problem

丁伯龙:行,再往前走。

Ding Bolong: Alright, let's go.

丁伯龙:到防火线咱们可以看看动物有没有什么痕迹。这有一个, 像是猫科动物,看那脚印是梅花状,那也就是有可能是狐狸。

Ding Bolong: Well look for animal tracks at the firebreak. Here's one

It looks feline, But it resembles a plum blossom so it could also be a fox.

孙朝辉:昨天下雨了,今天早晨新走的这是。

Sun Chaohui:It rained yesterday,so this footprint was made this morning.

结伴而行的野猪,独来独往的狐狸,充满好奇心的狍子,这些画面都是由几十台布设于林场不同位置的红外相机所拍摄。在2万多公顷的塞罕坝国家级自然保护区,生活着261种陆生野生脊椎动物、32种鱼类、660种昆虫,当然还有625种各类植物。

Groups of wild boars, solitary foxes and curious, roe deer have all been captured by the infrared cameras scattered throughout the forest in the 20,000 hectares that make up the Saihanba national nature reserve. There are 261 species of terrestrial wild vertebrates, 32 fish species, 660 insect species, and 625 diverse plant species.

#### 纪实: 杜兴兰与孙朝辉调查样地的草本生长情况

杜兴兰:细叶苔草,46(公分)。二叶兜被兰这儿有两棵,平均高度大概是在13(公分)。

Du Xinglan: This 46cm-tall plant is called Carex rigescens. Next to it are two Neottianthe cucullata plants, each averaging around 13cm in height.

杜兴兰采访: 2002 年成立的是省级的自然保护区, 2007 年晋升为国家级自然保护区。通过这二十多年的保护, 动物的种类和植物的种类都有了明显地提高。保护区的植物兰科的占主要, 国家二级保护植物大概是9种, 国家一级的保护区动物是有10种, 二级是有39种。黑琴鸡是咱们这比较有特色的, 咱们塞罕坝是它分布的最南缘, 而且

它是长期在这儿居住,所以我们打算下一步对它比较有针对性地进一步研究。

Du Xinglan:In 2002,it was a provincial nature reserve,but it was upgraded to national level in 2007 Over the past two decades,the diversity of animal and plant species has significantly increased Within the reserve there are nine orchid species,under second-class national protection,ten animal species under first-class national protection,and an additional 39 animal species under second-class protection. The black grouse is an important species here, This location-marks the southernmost point of their distribution and they've been here for an extended period, We're planning to conduct more targeted research on them.

昔日"黄沙遮天日,飞鸟无栖树"的塞罕坝,如今凭借着良好的生态环境和丰富的物种资源,成为了珍贵、天然的物种基因库。这里的百万亩林海、十万亩湿地,有效阻挡了浑善达克沙地风沙南侵,改善了塞罕坝及周边地区的小气候,每年所涵养水源量达 2.84 亿立方米,可吸收二氧化碳超过 86 万吨,释放氧气近 60 万吨。

It's almost hard to fathom that Saihanba as, once sandy mountainside is now a natural gene bank thriving with diverse species, with hundreds of square kilometers of forests and 67 square kilometers of adjoining wetlands. Not only prevent sand storms from the north, but also improve the local and surrounding micro climates. In addition, Saihanba and serves 284 million cubic meters of water, absorbs 860,000 tons of carbon dioxide and emits nearly 600,000 tons of oxygen annually.

绿水青山,就是金山银山。塞罕坝林业碳汇项目已成功在国家发

改委备案 474 万吨,预估经济收益可达数亿元。塞罕坝机械林场在逐步实现生态价值转化的同时,更带动了周边乡镇的发展。

The Saihanba forestry carbon sink project has reported 4.7 million tons of carbon dioxide to the national development and reform commission, resulting in economic gains worth billions of yuan. Yet, even as Saihanba provides considerable ecological value, it also fosters the development of neighboring towns.

哈里哈村,一个位于坝下丘陵地带的村子,沙化贫瘠的土地导致 传统农业效益低下,五百多户村民曾经都过着十分拮据的日子。随着 塞罕坝机械林场的建立,村子也开始了变化。

Haliha village nestled in Saihanba bosom once struggled with soil, desertification and low agricultural yields. Leaving over 500 households in poverty. However, with the establishment of the forest farm, the village has undergone a trans-formative journey.

当年,塞罕坝机械林场刚刚成立,距离林场仅十多公里的哈里哈村响应县委号召,组织群众赴坝上支援造林。曾在村子曾任职三十多年村支书的康文有,是当时最早上坝造林的群众之一。

When the forest farm was initially established, Haliha village responded to the county committee's call and quickly rallied the villagers together in support of Saihanba of forestation initiatives. Kang Wenyou, who served as the village secretary for over three decades, was one of the early participants in this endeavor.

康文有采访: 我跟机械林场最早交集是 1968 年。我们给机械林场栽树, 也整地, 主要是从那干活学的, 回来之后就知道树怎么栽了,

这个地怎么整了。这里面有一套技术,有几句栽树的名言叫:一锹扎下去,回首把苗提,深送浅提,提到红皮为宜。所以按照这个规律,你栽树的成活率肯定它就高。

Kang Wenyou:I first visited the forestry farm in 1968, We planted trees and learned how to prepare the land so we would know what we were doing. when we came back, there are things we tree planters often say to each other, such as "Dig down, plant the seedling deep but lift it up slightly until its red bark is visible. By following these techniques, we've been able to achieve a high survival rate for the trees.

学会了栽树技能的乡亲们开始改造村里的荒山。在塞罕坝机械林场第三乡分场派出的技术员指导下,1978年,时任哈里哈村林业主任的康文有,组织起了近200人的植树专业队,开始在秃山上育苗造林。

Applying these tried and tested tree planting methods, allowed the villagers to transform the landscape around their village. The effort began in 1978 when Haliha villages, forestry director Kang Wenyou and other leading experts formed a 200 member tree planting team to tackle the formidable challenge.

康文有采访: 你看树长这样挺不容易的,这是千辛万苦,千风万 险也可以说千里万曲。但是挺充实,干得挺有劲。那时候没考虑能有 这个成果,感觉到一个是得把哈里哈秃山光顶给改变了,让它栽下树 披上绿装,别让它洪水泛滥。

Kang Wenyou:Growing this forest was no simple task,Despite the numerous challenges,our hard work proved to be incredibly

fulfilling. Initially, our goal was to transform the barren hills of Haliha by planting trees to prevent flooding but what we achieved was beyond all our expectations.

自此之后的 30 多年,他们将 2.3 万亩的荒山石谷全部植绿,森林覆盖率达 78%,被誉为塞罕坝坝下生态第一村。森林成材后带来的收益,成为康文有带领村民致富的第一桶金。村民脱贫了,林子起来了,生态改善了,康文有又把致富的目光投向了养殖业。

Over the span of three decades, they converted 15 square kilometers of barren hills and rocky valleys into lush forests, achieving a remarkable 78 % coverage rate. The revenue generated from the mature forest served as the foundation of capital. That would eventually lead the villagers towards prosperity, with poverty alleviated and the ecology rejuvenated. Kang Wenyou then shifted his focus to animal husbandry.

康文有采访: 你栽上树了之后,它不也长草嘛。前七年你放不了牲畜,到秋天可以打草,打草冬天可以用。赶到过了七年之后,牲畜再进去它就不怕了,十来年都不成林了吗,更没事了。

Kang Wenyou:Once we planted the trees grass also began to grow.In the first seven years, grazing was banned but we could gather grass in the autumn to feed them in winter.After that, the livestock was free to graze and over a decade later it was a non-issue.

## 纪实: 康文有与村民搭建新的羊圈

去年刚刚从村支书岗位上卸任的康文有,开始了二次创业,担任起了村集体养殖场的董事长。一千多只羊,八十多头鹿,康文有和村里的干部不分日夜地照顾着这些村集体的财产。

Kang Wenyou who left his position as village secretary last year, is now the chairman of the villages animal farm collective. In charge of more than 1,000 sheep and 80 deer, he and other village officials keep a close eye on these shared resources.

纪实:康文有与村干部晚上视察新建的羊圈有没有漏雨,生病的 小羊羔有没有好转。

康文有:看看今天搭的棚漏不漏,今天比昨天好了。

Kang Wenyou:Is the shelter we constructed today leaking?It looks better than it was yesterday.

康文有采访: 我今年快70了,但是我能有一分热,我就得发一分光。塞罕坝的精神艰苦创业啊,这种精神不但过去有现在有,将来也得有这种精神。由贫到富,但那不是结局。你二次创业还得在一次创业的基础上更加奋进,更加努力,更加辉煌。

Kang Wenyou:I'll be 70 this year,but as long as I have the energy,I'll continue to make my contributions. The hard-working spirit of Saihanba remains vital today and for the future Transitioning from poverty to prosperity is not the end goal. In our second endeavor, we should build upon our prior accomplishments and strive to reach even greater heights.

同哈里哈村一样,如今塞罕坝机械林场周边的村民,都无比珍视 这片给他们带来美丽家园和幸福生活的万亩林海。

like Haliha, there are other villages surrounding the forest farm which have benefited from the new green landscape.

**邢国林采访:**咱们这村以前这块是秃山光岭,往哪看都不顺眼, 是脏乱差,等后来就是靠着林场的资源,把我们整个坝下这块的生态 给转变了。守着林场金山银山, 现在我不怕什么了。

Xing Guolin:In the past,our village was an eyesore because of its barren hills and ridges. However, thanks to the resources from the forest farm our local ecology has undergone a complete transformation with these resources at hand ,I'm no longer concerned.

**塞罕坝机械林场场长陈智卿采访**:助推乡村振兴,这也是我们二次创业的一个重点内容之一,通过塞罕坝的技术、品牌、驻村帮扶,包括我们一些购买当地老百姓社会服务,包括塞罕坝林下经济、采摘,同时通过我们生态发展对当地的拉动,每年当地百姓可以说 4 万人受益,直接给当地百姓创造的社会价值能达到 6 亿元以上。内蒙、陕西、山西、宁夏这一带全是用的塞罕坝的造林技术。

Chen Zhiqing:Promoting rural rejuvenation is a fundamental aspect of our second phase,Utilizing Saihanba's technology,brand,on-site village assistance local services, under-forest economy,and product harvesting we've revitalized the local economy. This benefits around 40,000 local residents annually and generates over 600 million yuan Saihanba's afforestation techniques are now being applied in Inner Mongolia, Shaanxi, Shanxi, and Ningxia.

引领一地、带动一方、辐射周边、绿色发展。

依托百万亩森林资源,塞罕坝机械林场的经济收入由建场之初的不足 10 万元增加到 1.6 亿元,并通过生态建设帮助 2.2 万贫困人口实现脱贫致富。如今的林场,已成为带领群众致富的"绿色银行"。2021年2月25日,在全国脱贫攻坚总结表彰大会上,习近平总书记亲自颁奖,将"全国脱贫攻坚楷模"荣誉称号授予了塞罕坝机械林场。

Relying on hundreds of square kilometers of forest resources, the Saihanba forest farms revenue surged from 100,000 yuan to 160 million yuan, catapulting 22,000 people out of poverty. Today, the forest farm is often referred to as a green bank, as it has become such an essential part of the local communities infrastructure. On February 25th, 2021, Xi Jinping officially recognized Saihanba contributions. When he bestowed it with the national poverty alleviation award. At the national poverty alleviation conference.

2022年8月,一支由国家林草局、北京林业大学、河北农业大学组成的考察队,在89岁的沈国舫院士带领下来到了塞罕坝,为《塞罕坝新时期发展战略研究》这个大课题做前期调研。

In august 2022, an inspection team comprised of members from the national forestry and grassland administration. Beijing forestry university and Hebei agricultural university visited Saihanba, led by 89 year old Shen Guofang. They conducted preliminary research for Saihanba development strategy in the new era.

#### 纪实: 各地调研简短同期

黄选瑞:现在,在这个地方的话,它稳定的群落是落叶松、云杉、 白桦。

Huang Xuanrui:Presently,the most stable plant communities in this region consist of larch,spruce, and birch.

沈国舫:三个树种比一比,在不同立地条件,哪个地方哪个树种 最好。

Shen Guofang:Compare the three tree species to ascertain which

conditions allow them to thrive the most effectively.

林草局司长:老一辈林业工作者经过六十年的奋斗,从一棵树变成了一百多万亩的一个林场。

The previous generation of foresters have dedicated 60 years of effort transforming individual trees into a sprawling forest farm which now covers nearly 700 square kilometers.

北京林业大学教授:人工林要从栽下去的那天开始,一直到至少 是中幼林这个阶段,我们要对它经营。

Professor at Beijing Forestry University: These forests should be managed from the planting stage to at least adolescence.

沈国舫采访: 习总书记已经提出来, 鼓励塞罕坝人更上一层楼, 要进行二次创业。我们是受国家林草局的委托, 组织一个团队跟林场同志一块来研究怎么样做好二次创业, 把我们已经走在前头的塞罕坝的林场事业, 能够更向前发展一步, 达到更高的高峰。

Shen Guofang:General Secretary Xi has encouraged Saihanba to set higher goals and initiate a second phase.Entrusted by the National Forestry and Grassland Administration we have teamed up with the forest farm to conduct research on its development.Our objective is to further elevate the already innovative Saihanba forest farm business and achieve even greater successes.

课题组的工作,将从塞罕坝的森林培育经营、经济发展、生态保护等 12 个方面展开,研究如何在充分发挥塞罕坝生态效益、社会效益、经济效益的前提下,实现生态保护、绿色发展和民生改善等各方面的良性循环。这将是塞罕坝新时期发展战略的总目标,也是塞罕坝

### "二次创业"新征程的航向。

The research team will investigate 12 aspects of Saihanba, forest cultivation and management, among which are its economic development and ecological conservation. The objective is to maximize the ecological, social, and economic advantages of Saihanba while enhancing the people's livelihoods in the process. This will serve as the overarching goal for the new era development strategy.

人不负青山,青山定不负人。

六十载风雨兼程,六十年沧桑巨变。从 369 名创业者肩负使命、踏进荒原,到三代务林人久久为功,驰而不息,一棵树、一片林变成了一片海。从育苗、造林、护林、营林,曾经逝去的美丽重回大地;到推进资源结构优化、森林质量提升、林业可持续发展,绿水青山变成金山银山,这是这片土地向全球生态文明建设贡献的中国方案。牢记使命、艰苦创业、绿色发展,曾经的梦想变为现实,无数付出换回了最美的容颜,塞罕坝精神将继续照耀着我们建设美丽中国、美好家园,书写人与自然和谐共生的壮美画卷。

Those who know how to harness nature's gifts are often reciprocated by its bounties. Beginning with the first 369 pioneering foresters, three generations of men and women have toiled over 60 years to accomplish an incredible feat. The complete transformation of a vast, barren landscape into one of forests, grasslands, and green horizons by nurturing seedlings, advancing a forestation and emphasizing forest protection and management. The once lost, beauty of the land has been restored through resource optimization, enhanced forest quality and sustainable

development. Saihanba has become an invaluable asset to the land, and its people highlight in china's contribution to the world's ecological civilization. The enduring spirit of Saihanba is a testament to the will of the people, the dream of a nation, and the awe inspiring resilience of nature, whether it is preserving intangible cultural heritage, is conserving natural resources or protecting wildlife. China continues to weave a diverse and harmonious tapestry of life for the world to enjoy.