

NCRP JOURNAL

National Cadastral Resurvey Programme

2025



Foreword

It is with immense pride and gratitude that I present this journal documenting the remarkable journey of the National Cadastral Resurvey Program (NCRP). The NCRP stands as a testament to the unwavering commitment and dedication of countless individuals who braved challenging terrains, harsh weather, and personal sacrifices to fulfill His Majesty the King's noble vision of resolving land-related issues for the people of Bhutan.

Launched with a Royal Command in 2006, the NCRP was not just a technical endeavor but a mission driven by compassion, aimed at ensuring secure land ownership for all citizens. Through relentless effort and perseverance, the program completed its mandate across all Dzongkhags and Thromdes, touching the lives of thousands and reinforcing the profound bond between the Throne and the people.

This journal captures the stories of surveyors, field assistants, land administrators, and support staff who walked through dense forests, crossed rugged mountains, and endured long separations from their families. Their dedication and resilience have paved the way for an efficient and reliable cadastral system that will serve generations to come.

As we reflect on these experiences, let us draw inspiration from the tireless spirit exhibited by the NCRP team. Their achievements remind us of the power of collective effort in realizing a national vision. I extend my deepest appreciation to all who contributed to this historic undertaking and encourage the readers to honor their legacy by continuing the spirit of service and dedication.



Secretary

Tshering G Penjor



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CHRONOLOGY OF CADASTRAL

1. INITIAL DAYS OF RECORDING LAND DATA

Around 17th century , Zhabdrung Ngawang Namgyal instituted a system of recording of land offered to monastic and religious bodies by general public as mark of veneration and faith.



2. THRAM MARTHAM CHEM

Around 1907 a comprehensive written inventory of land holdings in country was prepared which contained the land owner details, types of crops ,yield and tax payable. First Martham Chem was compiled in 1919 and later revised in 1936



UNIT OF MEASUREMENT (*SOEN DRE*)



(20 SOENDRES = APPROX. 1 ACRE)

SHORTCOMINGS

- Difficulty in searching information
- Difficulty in updation
- Contents were very static

3. ASHI TASHI THRAM (Parallel to Chain Surveys)



"MARTHAM CHEM" was revised and the unit of measurement converted to "lang-do" (area visually assessed) (Langdo- area that can be ploughed by pair of oxen in a day). The practice was replicated in all eastern dzongkhags and referred to as ASHI TASHI THRAM and later carried out in western dzongkhags.

3 Langdo's of Khamzhing / 4 Langdo's of Chuzhing = 1 Acre

INITIAL CHAIN SURVEY

1930 Chain Survey in pockets

- Babu Pema (Western and Eastern Region)
- Babu Duba Tshering (Western Part)
- Babu Thakur Singh Prasad Sinha Sibsoo (Sipsu) to Toorsa (Amo Chhu)

In 1959 around 23 surveyors were trained. Usage of Gunter Chains and optical squares and maps of the surveyed plots were drawn.

SHORTCOMINGS

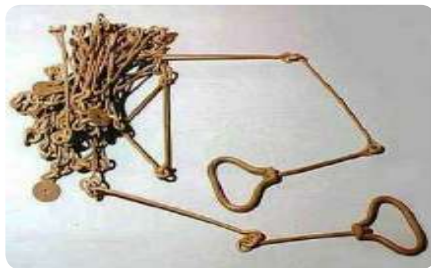
Records and maps prepared never made it to central archive and were lost in the organizational premises.

4. NEW CHAIN SURVEY

Chain survey covering the entire country commenced from mongar in 1964 where all surveyors across the country were pooled together to compile a comprehensive report.

ACRE ZINDRE THRAM - Foregoing the olden unit of measurements like " SOENDRE and LANDGO " and usage of more tangible form of measurement in "ACRE " mainly for the purpose of tax assessment.

The survey was completed in the year 1968.



SHORTCOMINGS

1. Rudimentary survey approach to record area and for computation formula where (**5 chains * 2 chains = 1 acre**) was used .
2. Assumptions - where all plots were considered to be rectangular and maps were not drawn but only the area was recorded.
3. Underskilled surveyors were employed to complete the project .

OUTPUT

New Thram outlook with introduction of thram number (unique identifier for land holdings)

SURVEYS IN BHUTAN

1980-1996

Issues: During 50th session of NA, 1979 the deficiencies of ACRE THRAM was deliberated. NA directed for the conduction of new Cadastral survey to improve the quality of land information.



SYSTEMATIC CADASTRAL SURVEYING USING PLANE TABLE.

1980 - started the survey in Paro and took around 4 years to complete because initially it faced challenges.
1996- completed the entire country survey and last was in Haa Dzongkhag

- Usage of RK-1 and Digital Planimeter.
- Survey carried out on 1:5000 and 1:2500 scale.
- All plots numbered uniquely within sheets and the sheets were labeled following standard index for the country.



TILL - 2005 COMPUTERIZATION ERA

Issues: After the PT survey the difference in the registered and resurveyed areas were observed to be significant.

Action Taken: Upon field verification the excess land area was to be regularized and payment to be borne by the land-owners (command by HM during 58th NA

NEW SATHRAM COMPILATION

OUTPUT = ACRE THRAM + DIRECT MAP REFERENCE

SHORTCOMINGS : management of data was arduous and slow, risk of losing data, need for large storage, difficulty in updation and increasing land transaction.

1992 - Computerization initiatives with the assistance from Swedish government and later expanded to include digitization of cadastral maps with Sathram information system called "SAKOR"



SHORTCOMINGS

- The changes in map couldn't be updated. Compatibility gap between the computerized system and human capacity to grasp the changes with use of technologies.

SURVEYS IN BHUTAN

2007-2011

Issues: During 86th National Assembly, the excess land issues was again reported and on this HM commanded for research and resurvey to be carried by NLC and OGZ for the entire country to acquire most reliable land information and secure tenureship.

Royal Command of 24th September, 2007 "Land issues must be resolved once and for all, if we do not take it upon ourselves today to carry out a massive and all encompassing exercise, then like in the past we will only make small improvements on the existing system but leave the biggest problems unresolved and for future generations to suffer as we do"

NATIONAL CADASTRAL RESURVEY PROGRAMME

A pilot project in Talo, Punakha 2007 - till 2011



2013-2014

SPILL OVER ACTIVITIES

Following issues were addressed and resolved :

1. Absentee cases
2. Land dispute /conflicts
3. Survey of registered forest plots (transformation proposed)



2015-2016

NCRP PHASE II

- The survey was carried out in collaboration with the Royal Bhutan Army to Survey registered forest plots which could not be surveyed during the NCRP.
- To Survey Z plots which were left un-surveyed during NCRP and Spill over activities
- To adjust Excess/Deficit in area.
- To resolve absentees/pending /omission/disputed cases





Honoring the Legacy of NCRP

- Geley Norbu, Director General

When I stepped into the role of Director at the National Land Commission Secretariat in July 2017, I was instantly captivated by the rich stories my colleagues shared. The sacrifices made by surveyors and land officials to fulfill the vision of His Majesty the King and to meet the needs of our citizens were nothing short of inspiring.

As time passed and many of these dedicated individuals left the agency, I grew concerned that their remarkable stories might be lost. Recognizing the importance of preserving these experiences, I requested the remaining officials to document their accounts for a journal.

The National Cadastral Resurvey Program (NCRP) was a nationwide initiative launched by His Majesty the King with the goal of resolving all land-related issues comprehensively. On December 28, 2006, during the 87th National Assembly session,

His Majesty declared:

"I am aware of the land issues faced by the people in the 20 Dzongkhags and the issues raised by people across the country have been well taken. I will grant Kidu as soon as possible and look into land issues myself, without having a third person in between."

Over the past seven years, I have come to appreciate that the NLCS is what it is today because of the tireless efforts and sacrifices of the NCRP team and those who supported them. They worked relentlessly, carrying heavy survey equipment through challenging terrains, dense forests, and leech-infested areas. They endured nights in makeshift camps and caves without electricity, pushing through tight schedules. For many, it was their first experience with computers, and countless others had to be away from their loved ones for extended periods.

Our surveyors, land administrators, SFAs, and drivers rose to the occasion, embracing the opportunity to be part of this historic national event. They gained invaluable life lessons, built strong camaraderie, improved public relations, and developed a deep appreciation for different dialects and cultural values.

With the successful completion of the NCRP in all Dzongkhags, His Majesty granted Royal Kidu to 151,649 beneficiaries, encompassing a total area of 157,276 acres. Additionally, His Majesty granted a total exemption for excess land payments amounting to Nu. 2590 million.

Today, the NLCS leads the way in

technological innovation, with advanced systems and processes firmly in place. This progress is enabled by a reliable and dynamic database on land and cadastre. Our next steps include integrating artificial intelligence, blockchain technology, and smart contracts.

As I honor all the heroes of NCRP and the NLCS fraternity, I extend my heartfelt wishes for their continued success and happiness.

Long live the King! Long live the Wangchuck Dynasty!



The Precursor to the NCRP

-Yeshi Dorji, Former Chief Survey Engineer

A detailed land survey is based on the coordinates of well-distributed control markers on the ground. In Bhutan, the control markers are usually established by the Geodetic Section. The control survey formed an important part of the National Cadastral Resurvey Programme (NCRP).

Prior to the NCRP, the Global Position Survey (GPS) survey campaign in 1997 was carried out with the technical support from the Survey of India. The GPS survey campaign for the establishment of zero order-geodetic network held in November 2003 was planned and surveyed with the technical support from the Swedish survey. The NCRP was the first time a project of a nationwide scale was attempted on our own.

Talo Gewog was decided as a pilot site for the programme, and the construction of control survey monuments was outsourced to a local

private contractor. One of the senior most Survey Field Assistants, Mr. Narma Wangdi, was sent to oversee the works and to ensure that the monuments were constructed at required locations. Subsequently, several surveyors from the Geodetic Section under the Topographic Division spent the winter of 2007 in Talo, carrying out the control survey in earnest. Mr. Tenzin Namgay (current Director of DoSAM) and I co-led this team.

We used five sets of bulky GPS instruments of different brands. One GPS set required at least three porters to carry the receiver, antenna, car battery, and tripod. It was a slow, tedious, and challenging process as the computations using data from different brands of instruments often conflicted and did not yield the required accuracies. As a result, we received several complaints later from cadastral survey teams about control



coordinates not meeting the accuracy tolerance. It was a pilot project, and we carried out the resurvey at Talo later along with the rest of the Gewogs in Punakha.

Surveyor Rinchen completing field notes.



Mr. Tenzin Namgay inspecting the GPS observation.



Our field office in Ap Wangdi's house.

A small office was established in a rented farmhouse belonging to one Ap Wangdi, who treated us more like his guests than tenants. We took turns to download, process, charge instruments, and practice. By the end of the campaign, we managed to train and build a small and competent control team. The first version of the GPS Control Survey Guidelines was also published. This was the first official document of the NCRP with the foreword signed by the Secretary of the National Land Commission Secretariat (NLCS). It proved to be an essential instrument for developing other NCRP Guidelines. The document was also referred to by the Royal Audit Authority to scrutinize field entitlements and claims.

The entire process of geodetic control survey, introducing procedures like network design, mission and session planning, were also streamlined. A network design showed how control stations were to be connected within an area of interest, a Gewog or a Dzongkhag in the case of the NCRP. The mission plan showed the observation strategy and deployment plan. The session plan showed the daily observation list with start and end time against each surveyor. As the number of teams and instruments increased, organizing multiple sessions of GPS observations would have ended up messily without session plans.

Attention to factors like the time required for a surveyor to reach the observation site with different logistical considerations was crucial. In order to have a fair assignment of stations for observation, we held 'lucky draws' every morning. This was significant as some stations would just be on the roadside while others may require two hours of rigorous uphill trekking. These simple daily practices introduced during the Talo pilot project made a vast difference in our productivity and significantly contributed to the overall NCRP progress. The Control team, who struggled to keep pace with massive cadastral survey teams, was ahead by two Dzongkhags at some point.

The inaugural ceremony of the pilot project was conducted at the historic Talo monastery. The rationale for selecting Talo as the pilot site was that it had all types of land issues prevalent in the rest of the country. The Rabdey, Dzongkhag, public of Talo, and the employees from NLCS attended the ceremony.

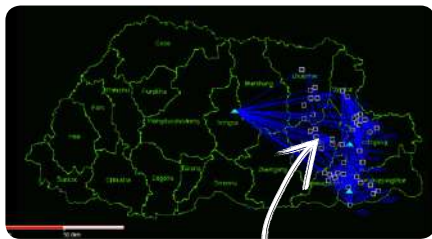
When it was decided that the NCRP would commence from Lhuentse Dzongkhag, we had to dispatch the reconnaissance team to plan the control survey networks in different Gewogs. We were told that the cadastral survey in Lhuentse would start sometime by July 2008. So, we had to carry out the control survey



Lhabsang Thuesel ceremony at Talo before carrying out the first observation.

immediately.

We hired private vehicles, as there were not enough pool vehicles. In May 2008 (date unsure), Mr. Tenzin Namgay and I headed towards Lhuentse in his Alto car. Surveyors were allocated five private vehicles packed with tents, instruments, and personal field gears. When the rest of us crossed Dochula, we were informed that one of the cars had some mechanical issues and was being repaired at the workshop.



Primary GPS observation network covering six eastern Dzongkhags

We proceeded after reaching an understanding that the four stranded surveyors would start early next day if the repair took time. Rest of us halted the night in Bumthang at the famous Kaila guest house. We took to our beds soon after the dinner as the next day was another arduous journey to Lhuentse.

There was a call on my phone at around midnight. I picked up half asleep and the man on the other end asked if I was a survey team leader. The caller was a caretaker at Bhutan Telecom's microwave tower in Palela. What he said next sent chills down my spine and woke me completely in shock. He said that a pickup with surveyors on board veered off the road at Pelela. Most of them were badly injured and managed to crawl uphill through the maze of bamboo

shrubs in darkness to seek help. I talked to one of them who was in a critical condition.



Control survey office in Pemagatshel. Then I called the Surveyor General and rest of the NCRP management team who immediately informed the ambulance and police in Wangdue. The injured passengers were assured that help was on the way. We thanked the caretaker and his family for their support and requested to continue helping the injured. Mr. Ten-

zin Namgay and I immediately returned and reached the accident site before dawn. By then all the injured were taken to Wangduephodrang hospital and were in stable condition. Unfortunately, one of them sustained long term injury. It took us the whole day to salvage the wreckage and retrieve all belongings including expensive GPS instruments. We completed compiling the accident report, took statement from the driver and organized a lunch for the investigating team at Damdum hotel. After that we had numerous near-miss instances, but fortunately that was the first and last major accident during the NCRP. Thanks to the Guardian Deities of Palden Drukpa and the collective merit of all NCRP staff.



My Personal Journey through NCRP

- Chimi Dem, Chief Survey Engineer

The NCRP was at its peak, spreading over a few Dzongkhags when I joined the National Land Commission Secretariat in 2011. I worked under the Urban Land Division for a few months before I and a few of my colleagues were asked to join the NCRP team in Chukha. The NCRP was at recess, and a week-long workshop was being held at the RAPA Conference Hall before the resumption.

Some of us, who were yet to join the task, felt disoriented hearing the unusual terminologies used during the workshop. The officials were discussing a number of issues and the way forward. The older generation experts were briefing the younger generations. Looking at the vast terminologies and a number of issues, the NCRP exercise did not sound like a cup of tea to me.

Prior to becoming a Resource Person (RP), one has to undergo an attachment with a senior surveyor to get

acquainted with the field procedures, legal matters, and the Thram history. I was assigned to one of the most hardworking, sincere, and experienced Surveyors at Ramirey Chiwog, Phuentsholing.

On the first day, we went for control densification. It was during the monsoon season. The vegetation was thick with leeches, and there is a high probability of encountering a snake bite. In such weather conditions, while rain boots are the recommended choice, I chose sneakers due to my personal unease. Moreover, it's essential for us to carry our own lunch and ensure an abundant water supply. However, due to excessive heat, my bottle of water exhausted before lunch, and there were no shops in the vicinity. I refilled it with the spring water available, not even ensuring whether it was safe to drink. That day, we covered the entire Chiwog, and by the time we were on the

road, it was already dusk. The camp was 4 km away. I asked my senior colleague if we could ask for a lift as I was exhausted. He kindly refused, and we walked for another 4 km. That moment, I regretted joining the task. I missed the leisure and liberty of the workplace at the HQ. I missed my cozy apartment, friends, and the happy weekends.

I was on attachment for about one and a half months, and then I was sent to another Chiwog as an independent Surveyor. The Chiwog lies along the Phuentsholing-Pasakha highway. Most of the lands were located on steep slopes. Many people had deliberately purchased these lands from the locals, preempting a hike in value and to propose for a land exchange in the future. Some even bought just for collateral purposes as it fell within class A and guaranteed a huge mortgage.

Being an independent surveyor, the responsibility of carrying out an accurate survey and making every landowner satisfied with the resurvey fell on my shoulders. While performing my duties, I tried to be courteous and explained to the landowners how and why their lands' geometry and areas had changed over the course of different surveys.

Apart from the concern of committing any unintended errors, I was physically fit to walk from dawn till

dusk. I was in my early twenties and enjoyed the work as it progressed. The struggle continued till the autumn leaves fell from the trees. As the exercise gained momentum and deadlines were set, no leaves were granted unless some deaths occurred in the family. We witnessed the Royal Wedding celebration from the field. All government holidays and Saturdays were working days.

After three months of surveying in the field, I was told to assist the RPs in data checking and integration. The Phuentsholing Gewog team was stationed in the heart of Phuentsholing town. People would come and go every minute—some happy and some frustrated. The pressure was immense, especially towards the closing. RPs had to listen to hundreds of grievances from the public. Some would complain of a surveyor favoring a landowner for being the host or having an affair with a girl in a family. The grievances were more where land values were high and owned by the literates.

During the peak of winter, I was placed as RP in the remote Gewog of Dorokha. The electrification works were underway, and we were given a generator for power supply. Little did I know about the Gewog profile; the first time I heard about Dorokha was in the fourth grade, and the only thing I knew was that it was a small village

of Doyaps under Samtse Dzongkhag.

As the work continued, we received lots of pressure from the Base Camp in Samtse to complete the task on the given deadline. Dorokha Gewog had about 3000 Thram holders with more than 7000 plots. The pressure was immense, and I had to search for backup surveyors from the nearby Gewogs. The task tested my capability and endurance.

The closing was even more difficult. With no electricity, the generator was untrustworthy. Time and again, it would shut down automatically due to mechanical failure. The last week of my stay at Dorokha was the most difficult, with sleepless nights and untimely meals. The small office and its surroundings would be filled with people waiting to sign on their Kappa endorsement forms. The Doyaps were the kind of people who wanted things to happen their way. The first day of Kappa hearing for their Chiwog couldn't be completed due to a huge number of cases, and they were asked to come the next day. Early the next morning, I saw a line of people sleeping outside our camp. They were the Doyaps waiting to sign on the Kappa forms.

Notwithstanding the harsh reality of the task, there came a rare time for fun. Most of the RPs were of similar age groups and loved to enjoy. The beginning of the month would be

the best time as the monthly TA/DA bills got disbursed. RPs would distribute the bills to their team in cash received from the base camp, as mobile banking services were not introduced back then.

Towards the end of the closing of every Gewog, the RPs would have a tremendous burden. They had to assure that the data were all verified and integrated and all reports were submitted to the geodatabase team at the base camp. Integrating data used to be a laborious undertaking, primarily because it necessitated extensive data cleaning beforehand. This process was time-consuming, particularly when dealing with a substantial number of surveyors. RPs had to ensure that the data of all surveyors harmonized without any overlaps and duplications. The intricacies arising from different case types added to the challenges of the integration process. On occasion, RPs would work into the early hours of the morning, grappling with confusion stemming from lengthy work hours and identical file names while maintaining necessary data backups. The responsibility of arranging pool vehicles for the Surveyors to be shifted to the next assigned Gewog also fell on the RPs.

One of the most challenging tasks of the NCRP was receiving numerous directives from the base camp. Such

directives confused us, rather than giving directions. Intuition and logical ability played a critical role in making a firm judgment during such times. RPs were involved in monitoring, validating, resolving disputes, and providing technical backstopping to the field teams.

My stay at Dagana was a pleasant one. I stayed at the lone structure above the highway near the Gewog office. Most nights, I would be validating the data submitted by the Surveyors. The task was a lot easier where Gewogs had competent and cooperative gups.

Together with the Gewog authority of Kana Gewog, I journeyed to the distant Chiwog, engaging with the community to provide guidance on land matters and work towards resolving their land-related issues. In one of the remotest Chiwogs called Batsa, where the motor road was just connected, people were amazed to see cars for the first time. We were received with a Marchang ceremony for inaugurating their road, though not officially inaugurated. On our way back, people walked their way up just to experience a car ride till the bridge.

The NCRP years presented challenges beyond one's imagination. Our days were filled with field visits, walking for hours, while nights were dedicated to validating data. Even the weekends didn't offer respite,

as individuals who owned land but didn't reside in the Gewog would schedule appointments for clarification and discussion. We remained undeterred by the rough landscapes and challenging weather conditions for months and even years. Some wouldn't have seen their families for ages, and some separated due to extramarital affairs. The farm roads were either eroded by rain or obscured by mud, necessitating hours of walking. The bridges connecting villages were also washed away during the monsoon.

The NCRP concluded in Zhemgang, and I was assigned to Trong Gewog. Most of the days were occupied with resolving land disputes. I enjoyed carrying out the task since it improved my mediation and negotiation skills. I, along with two of my colleagues, were involved in mediating a long-pending family dispute. I was content that we could resolve the dispute. But the misfortune happened a week later during the time of the Kappa hearing. The aggrieved party confronted me at the Gewog center in front of other landowners. After an altercation, my well-being was compromised, preventing me from conducting the data integration. Consequently, I had to reschedule the next Kappa hearing.

During my NCRP journey, I exerted considerable effort to provide effiThe

stowed upon me invaluable life lessons.

Presently, I can confidently assert that I possess a wealth of institutional memories concerning land reforms and am capable of undertaking any task with assurance.

Last but not least, I would like to thank the NCRP and the management for their guidance and support throughout my NCRP journey and for making the person I am today.

Kadrinchey La!



Towards the Spirit of the NCRP

- Ugyen Tshering, Sr. Dzongkhag Land Registrar

Pit-a-pat of raindrops, dripping from wooden ceiling in disarray. A light going off and on in uncertainties. Into far flung secluded place, like that of a hermitage, is my home. Listening to the sound of silence in the night and gazing at the moonlight; often into a Twilight kind of saga, I saw my fingers running down the keypad of my laptop, as common memoir of night life during the NCRP, in Gewog offices.

As dawn broke, still lying oblivious on the bed like a disgruntled school-going child. To the extent of inviting a knock at the door, sleep knows no end, as much as it knows no beginning. What has been nest of a serviceman that would influence our career vision there-after.

The ambience of Gewog office seemed more realistically embroidered with portrait of His Majesty the Kings, beamed from atop to ignite

flames of sublime visions. On the table lied heaps of land documents in process, almost wishing to be evaporated into wish-fulfilling gems. On and on, as we progressed, listening to the tale of land, as client narrated, we were both a stranger and listener of intricate tales: interwoven with fabrics of innocence and betrayal, of greed and sacrifice, that of villain and victim, all-encompassing yet impending truth from a certain distance. We were in witness of clashes between kith and kin, between insider and outsider but above all between parents and children. Thus till that moment, little have I known, that land matter could be as intricate and irresolute. Little have I known, that reality of land affairs were far beyond what individuals may call it easier said than done. It was during those moments in Gewog office, it took me on halt into self-questioning, "Why have I joined the NLCS?"

It took me my school days to correlate, where teachers usually emphasized students about ambitions in life. During those days, girls would blush out their ambition to be teacher, doctor and engineer. In total humiliation, the naughty back-benchers would violently gush out their ambition to be driver and conductor; only to be straight-ened up with back lash from the teacher. One of my friends raised his ambition to become Prime Minister.

Back then, I wasn't sure whether such post existed but the teacher applauded, so did the entire class. I presumed that it might be one of the big posts, beyond Bollywood movie stars, as we could best relay glory in relation to Bollywood movies then. However, in my entire school life, I have never heard anyone's ambition to be Land Registrar. Never even heard it uttered by the naughty back-benchers, nor even muttered by the blushed out girls. I wasn't sure that someday, I was going to lead a career life that I have never once imagined in my school days.

It was, when the nation rejoiced celebration of 100 years of Monarchy, in 2008, 24 of us received recruitment in the NLCS.. As Assistant Land Registrars, we marked a ceremonial beginning in our career life indeed. In the same year, the NCRP was com-

menced from a historically significant place. We were young and too early for the noble task, which came ridding over, as if to pronounce "If not by you, who? If not now, when?"

An enormous zeal and enthusiasm took off at the onset, in presupposing feelings of that a chosen one. Anxiety would gradually creep in like an uninvited guest. We were perplexed individuals, chasing over wax and wane dreams, within the sphere of urban domain. In spite, our collective destiny took us far aloof beyond Dochula, towards Pelela to Thrumshingla.

As we journeyed towards Lhun-tse in convoy, it was inseparable from a military parade, invoking highest spirit of patriotism. A flamboyant spirit, glorified by the rhythmic beats of patriotic music played in vehicle, surged in us, an indomitable spirit of might and beauty to pursue with the noble vision at any cost. Thus beginning, we laid an expedition into villages, to rediscover people to people, places to places, over the next few years.

While apparently, we were seen as land officials in single identity, we were collective group of individuals with our own stories in life, beholding personal inconvenience over convenience. Some had their wives left behind in pregnancy, while few were newlywed, or few almost wed.

Some had ailing parents to take care and children under special attention. Whatever the reason, the NCRP called on duty to serve nation beyond one's personal inconveniences. So was the tradition deeply rooted in the past, even during chain survey and later the New Sath-ram Compilation (NSC). For us, the 24 recruits, it was time to fall in love with nation and the people erstwhile falling into relationship.

Lhuntse is by far a religious place, endowed with culturally vibrant society. We had first to fit into that social domain, in order to have us accepted by the society. The best we could materialize was to inculcate ethnic values of the locality unabridged, as if we were one amongst them. The people preferred talking in their local dialect. They cheered us into implementing certain manner-ism appropriated in the society.

In welcoming they offered tea in warm gesture. In seeing off they organized Chogchang in sad gesture. Chogchang is by far the most memorable, as it summed up how much we have been valued by the society. It carried within its bound, cognitive components of all GNH values, resonated from edge to edge, corner to corner, of a boundless bonding, through times immemorial to eternal. We carried indelible memories to cherish lifelong but had only greeting

and smile to offer back.

Mr. Tshewang Gyaltsen, was the Chief Executive coordinator of the NCRP, taking charge of around 400 staffs in the field, on regular basis. He was a well experienced man with uncom-promising leadership quality and carried good institutional memory with extraordinary or-ator skill. Underneath him were respective Field Coordinators, Resource Persons (RP), Land Registrars, Surveyors and SFAs, RNR and DCRC officials.

We were scattered all over places into every nooks and corners, like creeping of serpentine roots. When we left places, we left like formless clouds, dissolving into the vastness of sky. Although, we came from different professional back-ground, the spirit of the NCRP called forth a common ground of purpose. Altogether, the spirit of NCRP was built at the highest esteem to celebrate workahol-ism against mere professional-ism, integrity above diplomacy, emotional intelligence over sheer intellect. It called forth an uncom-promising dedication beyond time and space, to embrace performance both qualitative and quantitatively. When we walked our separate ways, the spirit came chasing us. When we gathered together we glorified to its utmost sanctity.

As we resumed our duty in respective Gewogs, there was proliferation

of competitiveness, in spirit and dexterity, growing amongst the friends to know things much ahead, perform better and make a difference at work place. It was a matter of pitching oneself into climax of human intelligence, dignity and integrity at the workplace. As fresh recruits, we were naturally drawn to the commonly driven spirit of service joy and ecstasy, inspired by sheer blossoming of the sublime vision.

It was never enough. Still after a daylong ceaseless toils and burning midnight oils, the story of land would boil concerns. Still after implying the most soothing words, truth would hurt the clients. No clear provisions of Law could best convince, neither newest technology could best measure. Issues of land affairs would differ from people to people, from places to places. If land affairs could be tangibly weighted, dissatisfaction would always ride over satisfaction. It is simply that value of land has risen over a period of time, while people would try all means to keep up with their joneses.

As we went by, we would come across people, breaking into utter tears with folded hands to say "Son, you have done a great job to our family. Let you prosper in life. May God bless you". On the contrary, we would confront allegations and threat to call authorities. Perhaps, one may be rec-

ognized for an incident of allegation put through but one's entire great works may dry away, along the tears drying off of eyes.

It was during such moment, the NCRP spirit was confronted with greatest challenge. It would certainly entail paramount self-sacrifice to risk, when situation demanded diplomacy, legal tuning and political correctness. It was then a step beyond human action, where God is the sole witness and clear conscience is the only guide. In spite of all kinds of trouble, we took enormous risk, invested full potential, and rendered unconditional support, with the sole intent of putting wellbeing of people, our only priority.

Through all those moments, we paved places unpaved, explored places unexplored, from Eastern to Western, Northern to Southern. Within ambit of 5 years long, we explored almost all places and lived amongst the people from Lhuntse to Zhemgang. As much as we know them, they know us. As much as we greet them, they greet us. It was a bond of mutual respect and mutual concerns, totally entangled in on the beauty of Newton's third law.

The NCRP as a collective achievement of all those engaged in the field was processed through the medium of the spirit, thus serving the gargantuan descend of the noble

vision. The spirit of the NCRP embodied within it, the spirit of happy people, who celebrated closure of the camp at the end. It embodied within it the spirit of deceased people, who lost life during the course of the program. From those who had to file divorce law suit, to those who got fired in the job, the NCRP spirit embodied within it the value of self-sacrifices that comes once in life time.

Even today, as we dwell in the post NCRP era, the spirit of NCRP keeps chasing after us. Although, the NCRP moments have dispersed into eternal times, it has left foot prints of memoirs, embarked on lifelong values. Within corridor walk of these sentimental values the story of the NCRP is being written, through thick and thin human endeavors.



Brief NCRP Story

- Rinzin Dorji, Sr. Land Record Supervisor II

National Cadastral Re-Survey Programme (NCRP) was carried out in accordance to the Royal Command of His Majesty the King, the resolutions of the National Assembly and the provisions of the Land Act 2007. The National Cadastral Re-Survey Programme (NCRP) was carried out in all the Dzongkhags and Thromdes. The same was done using the Total Station equipment (latest Surveying Tool). Upon the endorsement of strategic report from the Golden Throne, the cadastral maps as well the Thrams (land records) were regularized. Accordingly, new Lagthrams (land ownership certificate) were also issued to the people. All the Bhutanese people across the country revered the kindness and compassion shown from the Golden throne in the form of land Kidu. Yet, with the change of time, hopes, aspirations, and expectations, if the Royal Kashos along with other related documents

(adopted and implemented during NCRP) are investigated, implications are expected to surface.

Conflicts and doubts are anticipated to arise amongst benefited landowners, government officials involved during NCRP, survey assistants, and surveyors including relevant officers. Furthermore, in the process of investigation, if the Royal Kashos are interrogated, it might belittle the benevolent aspirations of His Majesty the King. Therefore, it's imperative to look into this matter immediately to avoid future implications and/or complications.

The NCRP was initiated because of the following reasons:

Endless appeals on the regularization of excess land measured during NSC (National Sathram Compilation) in the names of people without having to pay for the excess land;

Endless appeals to buy back the ex-

cess land taken over by the government as the landowners failed to deposit the land fees on time;

Appeals to grant some time to the poor families who were not able to pay the land fees on time; and

Repeated discussions and de-liberations on land issues in the National Assembly.

On 28th December 2006, corresponding to the 11th month of Fire Dog Year, His Majesty the King, during the 87th session of the National Assembly, declared:

I am aware of the land issues being faced by the people in the 20 Dzongkhags and the issues raised by the people across the country have been well taken. I will grant Kidu as soon as possible and look into land issues myself, without having a third person in between.â€

Accordingly, a Royal Decree was bestowed upon NLCS to start and complete the nationwide NCRP within a time period of 3 years. On May 5, 2008 the project commenced from Lhuntse by regularizing and computerizing the thram data. The survey works were carried out and completed on December 12, 2012 at Zhemgang Dzongkhag.

Brief NCRP Story

My initial assignment began from one of the remotest and far-flung villages known as Gondue in the eastern District of Mongar. During those days, there were no access roads, and it took two days' journey to reach the destination. The footpaths were as narrow as the monkey's pathway. We had to pass through rugged terrains, harsh gorges, and thick forest. I had never had experienced such hardships in the past. I nearly gave up and returned from half-way. However, His Majesty the King's aspiration and my hope to serve the people to the best of my ability kept me going.

On reaching the Gewog the next morning, we started interacting with the people of Gongdue Gewog. Not having heard their dialect in the past, we had challenges while interacting with the people. Nevertheless, with the assistance of local government leaders and officials the exercise was executed smoothly within four months.

In the midst, while the exercises were still ongoing, I was summoned by the field coordinator to report to the Mongar base camp. There I no more had to do the thram regularization work. I was assigned a new task to compile the completed and regularized Thrams of other agencies as per the survey reports, to be submitted to

His Majesty the King.

I had difficulty carrying out the assigned task taking into consideration my education-al background. I initially had a tough time on how to go about with the assignment and how to come to a conclusion. However, with constant advice and guidance from the field officers I gained experience. There was no uniform working procedure for different agencies. We faced difficulties when it came to tally the data.

We had to complete the preparation of reports for tens and thousands of plots. Though we were working round the clock, we had tough time completing the report on time to be submitted to His Majesty the King. His Majesty the King was on Royal Tour to villages, granting audience to each and every individual and granted land Kidu.

Cadastral surveys were carried out even though Thrans were yet to be updated. Though tasks were incomplete, camps had to be shifted from Gewog to Gewog. This put tremendous pressure on the officials while carrying out their tasks efficiently.

Prior to the NCRP project, most officials were not acquainted with the use of computers. With supportive team leaders and good team spirit, were motivated enough to "pass through the bridge one has con-

structed". Due to His Majesty's far-sighted vision, aspirations, love and care for His people, we could achieve what other countries would not have achieved in such a short duration.

As an old dog bark because of his illness/old age, other packs follow the suit without knowing the actual reason. Similarly, there are chances that an investigator may investigate a case related to land without understanding the nuances and background on how so many people have sacrificed to make NLCS an envy to other agencies. If NCRP related Kashos, documents and procedures (SOPs) are made freely accessible to the court of Law and oversight agencies, unprecedented issues are bound to occur.

Going forward, rather than digging the old graves, I feel that the basis for any or all land related issues should begin with the NCRP database. This is because, NLCS now has a single source of truth database on land, which is not only dynamic, but very reliable and predictable. This was made possible, only through the far-sighted vision, concerns, and care of His Majesty The King towards His country and the people.

Long live the King. Long live the Wangchuck dynasty.

The golden words from the Golden Throne, His Majesty's compassion

towards His people and His aspiration to address all the land related issues had not only made the Bhutanese fortunate but I am privileged to have had an opportunity to serve the

nation through the project. It was a lifetime opportunity for me to serve the King and the people to the best of my abilities, which I did without fear, and complaints.



My NCRP Experiences

- Gyembo, Sr. Land Registrar, Wangdue

Right after our graduation and RCSC examination, I along with 23 others joined National Land Commission Secretariat (NLCS) on the 15th of March, 2008 as Assistant Land Registrars. We were eager and enthusiastic to learn and work with full dedication. In spite of our indomitable will, most of the official documents were written in Dzongkha. The entire working procedures, including carrying out normal land transactions, Thram updations, correspondences to Dzongkhags and note sheets, were all prescribed in Dzongkha.

Most of us were graduates with different field of studies. Despite having received relatively a good standard of Dzongkha literacy during school and college days, our challenges were then about applying it in most professionally at the work place.

Back then, the NLCS was in preparation of the noble task of carrying

out the National Cadastral Resurvey Program as per the Royal Command, conveyed during the 86th session of the National Assembly in 2007. A pilot project was conducted at Talo under Punakha Dzongkhag for 2 months, from April-May, 2008. Hardly after a month of attachment at the HQ, we were assigned to Talo, in 2 consecutive batches, in order to get acquainted with the field work experiences before deployment in the NCRP.

The NCRP officially commenced from Lhuntse Dzongkhag in June 2008. We were fortunate to be the first batch of officials deployed in the NCRP and were excited to join the team. Since we were new recruits, we were deployed with one of the senior LR officials to guide along until being fully empowered to lead a team independently. During my first NCRP deployment, under Lhuntse Dzongkhag, my friend Mr. Ugyen Tshering and I

were assigned along with Mrs. Tashi Wangmo , Sr. Land Record Assistant at Khoma Gewog, for 2 months. Mrs. Tashi Wangmo was kind enough to share her knowledge and experiences of land affairs, accumulated over years through practices. With-in a short period of time, we learned how to pick-up manu-script information from kappa Thram for migration into digital environment and processed land transaction through locally connected digital interface, built by in-housed IT experts.

After 2 months of field attach-ment with seniors at Khoma Gewog, we were instructed to lead a team in respective Ge-wogs, due to manpower short-age. In August, 2008, I was deployed in Saling Gewog and my friend to Drepong Gewog, both under Mongar Dzongkhag. I was assigned as the Team Leader of Saling Gewog along with my friend Sonam Rabgay. We had our interim office and camp setup at the Gewog office that catered land services to the public of Saling Gewog for three months until mid November, 2008.

I had been then assigned with the third Gewog Silambi, which was one of the remotest Ge-wogs in Mongar Dzongkhag. The Gewog was neither con-nected with road nor electricity and was about 3 days walking distance, from the nearest road point. I was provided with all requisite field

stationeries, along with generator and petrol for powering of printer and laptop usages. My 3 days of journey towards Silambi Gewog through rugged terrains, thick jungles, crossing mountain passes with the potters porters took a night halt at a cave. It was one of the most unforgettable, yet cherish-ing moments in my life.

It was also one of my toughest take offs in the field world, still lingering in my vivid conscious-ness. I reached my destination at Silambi Gewog after 3 days of journey on 21st November, 2008 and was bewildered upon seeing the pathetic condition of the Gewog office in a small shabby hut below Nagor Prima-ry School. Nevertheless, I spent about 5 months at the Gewog office, rendering land services to the public of Silambi Gewog.

While leaving for NCRP in 2008, I left my wife behind in pregnancy with her family at Paro. I could not attend her during delivery, due to my field en-gagement at Silambi Gewog. On Monday, 26th January 2009, my wife gave birth to a baby boy at her ancestral home. No sooner had my friend Jigme shared the news of the birth, my heart filled with immense joy and pleasure in the field. That day happened to be one the most unforgettable and delightful moment in my life. At the same time, I felt sorry and unfortunate for not being able to present myself physically, when she

required my presence unconditionally. The engagement of NCRP activities has missed out my opportunity to witness the birth of my very first child but then I didn't regret, since I had bigger role to shoulder in serving the nation, when time availed. After 3 months, I managed to avail leave and went to Paro to meet my son and was so enthralled upon seeing the face of my son for the first time after 3 long months. Not before too long, I returned to my station at Silambi Gewog, after a week-long vacation and resumed duty.

Later, after completion of the work at Silambi Gewog, I was sent to Ramjar Gewog under Trashigang Dzongkhag in June 2009. Till the end of 2009, I was continuously placed in various Gewogs, one after another. During the entire period of the NCRP, we spent most of the time in the field, sacrificing family time back home. It was worthwhile observing that

prolonged absence from family led some of the couples to get divorced due to distant relationship. On the other hand the bachelors in the field took the moment as an opportunity to explore their life partner and got wedded at the field itself. Those were some of the unforgettable moments of the NCRP, borne along the fate of destiny and will of mankind.

The overall engagement in the nationwide cadastral resurvey program bestowed pride and gratification in us, for being able to actively take part in the most significant national event, conducted on Command of His Majesty the King. In gist, the NCRP inculcated within us lifelong values, knowledge and skills, empowered public relationship, diversified local dialects and cultural values, which otherwise would have just remained a dream.



The Saga of Eidetic Mission

- Kinley Tshering, Sr. Surveyor

Through the lens, viewed nooks and corners.

Through the window, deter-mined dimensions and volume.

Through the assiduous journey, realized shapes and sizes.

Through which the right of land is embedded.

Giving birth to this saga of once in life time,

The task mounted was a piece-meal undertaking:

Daily meals were none-timely rou-tined,

Night's sleeps were half awak-ened,

Harsh weather blew hot and cold,

While near ones seemed too far.

The sun kissed the tender skin sa-distically,

The rain lured and hugged se-duc-tively

Leaving her abused and deject-ed.

Deep down, yearned the long lost gentle touch

Of once infatuated head over heels as the night had fallen.

Effectuating task let late-eve-nings:

Amidst thorns and nettles,
 With both legs mired in boggy mud,
 The vampire; the blood sucking
 leeches,
 Spanned across the frail body,
 While the creaking creatures ampli-
 fied to the top
 As the dusk enveloped all. Overtired,
 back to camp:
 Windows laid to peep through days'
 work.
 Weaving web of property boundaries
 for hours,
 Looming intricate flowers and buds
 in between,
 The daily ritual accomplishes at
 midnight.
 Designed as a surveyor and defined
 by ethics,
 Synchronized the resilience of phys-
 ics and mental states,
 Like a robotic instrument, our daily

companion.
 When it runs through the bat-tery,
 So did we run through the flat-tery.
 For being endowed with trust and
 confidence,
 To sort the assets for genera-tions.
 Turning deaf to disdains and curses,
 We strived to carry forward
 Ensuing the indelible Royal Com-
 mand
 To resolve once for all, the land issue
 In a place prevailed in the uni-verse:
 Where land showered from the sky
 And only the fortune decides to be
 born here,
 Under the Bodhisattva King in dis-
 guise of Supreme Lord,
 The wish fulfilling gem, In the King-
 dom of Drukylul,
 Where the land never fell short of joy
 and laughter.

**NLC, You Are My Life Force**

- Sangay Tshomo, Land Record Asst. IV Punakha

I am a sincere and loyal employee of my parent organization. To it, I am immensely grateful. I owe deep gratitude and respect. When I was at the brink of desperation and when dreams were about to shatter, NLC accepted me wholeheartedly. I felt fortunate along with others to be a part of it. It embraced me though my academic marks were comparatively not as high as others'. It brought me to this level. It made me a capable woman today. When I reminisce about the past gone days, I just rejoice proudly over my achievements.

Many jobless youths those days, including myself, were selected as contract employees. Then, we were provided training regarding our work and responsibilities before we were sent to the field. As a Land Record Assistant, I really don't know how much I have suffered and the challenges I faced. But I traveled from place to place, I walked in the rain, faced the

heat, and climbed the mountains. I got satisfied every time I was able to help the peasants who lived in remote areas. My team and I helped them in keeping their land records.

Unlike in the past, the record-keeping is made safer and more convenient for people to trace their land. Some people appreciated our work, while others were quite challenging to deal with. Yet, we made it through all the obstacles and hindrances. We were able to provide the services to all people across the country. We achieved things that were not there in the past. We progressed indefinitely. We felt a great sigh of relief over those struggling nights.

Almost five years ago, our contract term was completed. And for a few months, I felt like I had lost something so dear to my heart. Actually, deeply, I missed my job. I felt quite sad and feared losing my acquired skills.

Slowly, things changed for a better cause. I was once again selected as a Land Record Assistant along with many of my friends through open competition. This time, we all were selected as regular employees. I felt much relieved and secured. NLC showed us compassion, and for that, I'm sincerely grateful.

Not any organization took that many frequencies of workers and regu-

larized their employees; however, NLC did. I feel as the most fortunate employee among all other organizations. Thanks to our wise visionary leaders, we are way back home with much enthusiasm and dedication to carry on with the mission and vision of NLC. Thank you beyond the sky and earth.



A Glimpse of NCRP Phase II (through the lens of a Soldier)

By Collective compilation of Major Laja Wangdi, RBA Coordinator & Sonam Tobgay, Chief Survey Engineer, Thimphu Thromde

"The important feeling of attachment and belief in the future of the country will only come about if the people have effective and secure ownership of land."
– His Majesty the King, September 24, 2007

It was with this noble vision that the National Cadastral Resurvey Program (NCRP) was initiated by the National Land Commission (NLC) in 2008 and successfully completed sometime in 2012. Three years later, in 2015, the Royal Kidu was further bestowed upon the people of Bhutan, and this time it was realized through the collaborative service of the NLC and the Royal Bhutan Army.

With immediate effect from February 10, 2015, resourced by the Survey Officers from NLC, about 88 RBA personnel (including 5 Officers) underwent intensive survey training at

MTC, Tencholing. During the course, the joint Survey team was blessed with the Royal audience at MTC on April 29, 2015. Subsequently, in May 2015, the Survey team commenced the NCRP – Phase II, starting from Punakha Dzongkhag.

While the Survey Team continued to execute the indispensable task, the Soldiers' quote of "Adm fit, Morale high" was further braced by His Majesty The King's address during the Passing Out Parade of the 72nd and 73rd batch Royal Bhutan Army recruits, Tencholing. An excerpt from the Kuensel report reads:

"An example of the support by armed forces to development activities is the assistance provided to the National Land Commission to carry out land surveys for the second round of the Nationwide Cadastral Resurvey, as part of His Majesty's Land Re-

form Exercise. The second round of His Majesty's land kidu, to include all those who were omitted in the first round, has already begun."

Escorted by the Royal guidance, the NCRP Phase II, over the years, successfully completed surveys in 10 Dzongkhags. Notwithstanding the harsh winter seasons of Bumthang and the scorching weather of Lhamoizingkha, the team gracefully continued to render selfless service to the people. However, on the hind side, although the task was par-

amount, the opportunity to reach places as far-flung as Lhuntse and meet people from different walks of life was in itself an unparalleled experience.

Today, having successfully completed the Project, the RBA Survey team proudly continues to extend service to the Gyalsung Project and similar other disposals. The RBA is indeed blessed to have been entrusted with such a tantamount task, and it is because of this very reason that we invariably believe in "Service before Self."



The Story of Scorpio Pickups

- Yeshe Dorji, Former Chief Survey Engineer

The draft NCRP (National Cadastral Resurvey Programme) implementation strategy document proposed an initial budget of around Nu. 260 million. The budget proposed included the purchase of Toyota Hilux and two DCMs, besides uncountable other things. This caught the attention of the Ministry of Finance. After many rounds of negotiations, we were directed to go for any vehicles manufactured in India instead of Toyota Hilux. The best choice then was the Mahindra Scorpio brand pickup truck, which cost almost the same as the Toyota Hilux.

When the NCRP was underway in Lhuentse, seventeen brand-new Scorpio pickups arrived in July 2008. Three lucky Dzongkhags got the remaining white-colored vehicles with "National Land Commission" inscribed in bold across both sides of the body.

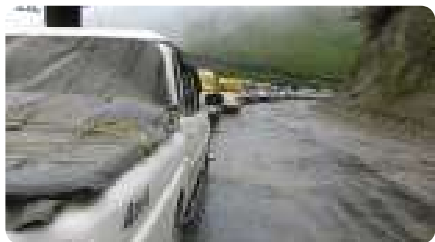
It was quite a spectacle to witness a convoy of so many identical cars zooming along the east-west highway. Most of the drivers were young new recruits, and they got the best out of these vehicles. Someone once remarked that these Scorpio pickups did some good and some damage to the NLCS. They provided much-needed promotion for NLCS and NCRP. At the same time, they created an impression that we were misusing pool vehicles.

The new pickups were swiftly divided among different teams. For many, it was a huge upgrade from traveling in the back of the DCM to having allocated elegant duty cars. Unfortunately, the excitement was short-lived. The vehicles were no match for the extremely bad condition of newly constructed farm roads and the urgency and speed demanded by the NCRP.



Training in Mongar

Midway through the NCRP in Mongar, a part called the "Torsion bar" started breaking, one by one. The spare parts, costing about Nu. 4500 each, took considerable time to reach as the vehicles were the first of their kind in Bhutan. Meanwhile, a senior private mechanic was hired to conduct a week-long training in Mongar for the drivers, particularly in the care and maintenance of Scorpio pickups.



On the way to Thimphu

In Trashiyangtse, the vehicles started damaging suspension bushes rap-

idly. That was understandable due to the road condition, and the part was easily replaceable. However, the other problem was significant. Each wheel was supported by an arm-like structure called the "Arm bar," which acted like a shock absorber and maintained the alignment. One vehicle had an "Arm bar" broken with a loud thud sound. After that, the vehicle in question appeared structurally compromised and rendered completely un-drivable. Other vehicles followed suit. The grounded vehicles had to be towed to the nearest workshop. Again, parts took time and were very expensive. This way, we had our entire pool vehicle fuel and maintenance budget exhausted midway through the financial year.

Plagued by numerous issues, we were plodding through Trashigang by the first quarter of 2010. Having had enough problems with the vehicles, we floated a tender for maintenance by local workshops. Another major problem started in Trashigang. One morning, one of the Scorpions produced a loud noise and thick black smoke. It then simply stopped moving. Like a contagious disease, other cars started breaking down with the same problem, needing to be transported all the way to Phuentsholing for repair. Hiring a truck to transport the grounded Scorpions cost at least Nu. 15,000. Plus, the concerned driver had to accompany. The first vehi-

cle took months to get fixed. The cost was more than Nu. 80,000 as they had to remove the whole engine and repair it on a trial-and-error basis. Others cost much less, but the problem persisted.



Being transported to Phuentsholing from Trashigang

In my additional role as a field motor transport officer, I submitted a proposal to train two drivers as mechanics. That was immediately approved by the Director. The Chief Administrative Officer completed all formalities. Two drivers who had some prior mechanical knowledge and aptitude were selected and sent to Phuentsholing for a month-long training with full in-country training allowances. They successfully completed the training and returned to the field.

When the first vehicle broke down after their return, I promptly asked them to make use of their newly acquired skills. They laughed and thought that I was joking. When I insisted that after having invested in them, it was reasonable to expect some benefits, they told me that firstly, the duration was too short, and secondly, they needed a complete set of essential tools. There was nothing I could do about the first. However, I sought approval to buy two sets of tools, which they selected and procured by the Headquarters, costing Nu. 30,000 each. They have successfully carried out numerous repairs and patchworks thereafter.

By the time we reached Bumthang, the Scorpios were increasingly impacting the progress of the NCRP. We got so desperate and started googling Scorpio common issues and troubleshooting. We browsed through the owner's manuals and CDs. We stopped transporting Scorpios to Phuentsholing for a few reasons. Firstly, each mission took almost the entire year's budget for that vehicle, without any warranty. Secondly, our two mechanics learned to quickly fix minor problems, and we had stocked enough common spare parts. They carried out major repairs by blocking parts from vehicles that had already broken. It worked this way: if we had three broken vehicles, they repaired two by using parts from

the third one. After some time, a few were made almost skeletal and had to be transported to the Headquarters.



When most of the Scorpios were rendered defunct in less than three years, we had to resort to hiring private vehicles once more. Meanwhile, three Scorpios in the Dzongkhags suffered a similar fate.

Since the Dzongkhags did not have the luxury of reappropriating the budget like the NCRP, they had no option but to surrender the troublesome vehicles to the NLCS.

The hiring of private vehicles entailed many challenges. There were tender formalities, and it was very difficult to control vehicle logs against the increasing bills every month. So, NLCS had no option but to send a proposal for the procurement of twenty new vehicles with an elaborately justified explanation. Our long-held desire to own Toyota Hilux was once more highlighted. Nothing materialized for some time. Fortunately, during the first quarter of 2011, when the NCRP

was progressing in Punakha-Wangdue Dzongkhags, NLCS had a rare opportunity to make a submission that the lack of reliable transport was the main impeding factor of the NCRP. Not long after that, we heard that the order for twenty Toyota Hilux had been placed with the State Trading Corporation of Bhutan.

We received shining new models of Toyota Hilux in early 2012 when the NCRP was underway in Samtse. When we concluded the NCRP from Zhemgang in 2013, the vehicles were still in brand-new condition.

The story of Scorpio pickups got interesting after that. The off-road vehicles filled the huge parking space behind the NLCS office building, in full view from the Secretary's office. The Secretary was not happy with the sight of a football ground-sized parking space turned into a junkyard. When nothing happened after several months, the Chief Administrative Officer was instructed to get rid of the vehicles immediately. A few were surrendered to the Department of National Properties (DNP). Since public auctioning took time, DNP refused to accept any more, citing a lack of parking space. NLCS office parking space was out of the question. So, the remaining fifteen or so vehicles were towed to the NLCS campus in Namseling. With this, the matter was put to rest for some time.

The issue of a significant number of pending land substitution cases lying with the Dzongkhags surfaced in the media. When the Dzongkhags' Land Sectors were put under increasing pressure, they submitted the lack of transportation as the main reason. With the NCRP spillover project in the pipeline, the new Toyota Hilux were out of the question. And nobody wanted the old Scorpios. At

the same time, the need to enhance Dzongkhag land sectors had become paramount. Finally, NLCS sent another proposal. This time, it was proposed that NLCS would surrender all Scorpios in exchange for new Bolero pickups for the Dzongkhags. One fine day, new Boleros filled the same parking space at the NLCS office premises.



The NCRP Journey in Phuentsholing
- Tashi Paldon, Superintendent Survey Engineer

Letter number NLCS/CID(3)2015/002760 dated November 4, 2015, stated that a listed official shall proceed to Phuentsholing Thromde with immediate effect and commence the NCRP from the second week as informed earlier. I was the Resource Person. With no experience, I was skeptical of leading the team, and that too in one of the important bordering towns without reliable resources for reference.

November 11, 2016, was the 60th Birth Anniversary of the Fourth Druk Gyalpo. The preparation for the grand celebration was going on in Phuentsholing Thromde. Therefore, we were asked to postpone the demarcation works.

I went to convey the same to the then Chief of Cadastral Information Division, with the letter from Phuentsholing Thromde, preparing for the worst response.

As expected, the response wasn't pleasing. He immediately undermined my competency. I quote, *"This reveals your competency. Just go and occupy one of their offices and prepare for the works, but you can start the actual field works after the event."* Unquote.

With a heavy heart and watery eyes, I returned to my office. I informed the same to my team and prepared to leave.

On November 5, we left for Phuentsholing with no knowledge of whether we would have proper accommodation and meals. We reached Phuentsholing at around seven in the evening. Unexpectedly, Thromde hadn't managed to get us accommodation. I had to inform the Secretary, National Land Commission Secretariat, at odd hours. He immediately called the then Thrompon and directed him to arrange accommodation for us.

We were then directed to the Department of Road's guest house until they found us a rented space. Satisfied with the lodging, we went to dine in the hotel, hoping we wouldn't have to continue the following days to dine like newly paired-up couples. But then, with just a room to sleep, our feasting routine continued in the streets for almost a week, testing almost every dish. Having nourished ourselves with the daily monotonous roster, we managed to sneak out of Phuentsholing while they were busy preparing for the grand event.

We returned immediately after the event, though, fearing we might get caught by the superiors. A few days later, Thromde managed to provide us an abandoned two-storied house, acquired by the Ministry of Economic Affairs (MoEA) for the construction of a mini dry port (MDP). It was well known as Booth Bangla (haunted house). Pleased with the shelter to call our own for an undefined number of days, months maybe, we cleaned and set up our rooms, offices, and other amenities.

As the night crept in, fear of holding a night alone in our respective rooms in the haunted house stimulated in me. With folded hands, I prayed to the Gods and Goddesses like I had never done in my lifetime. They, perhaps, heard my prayers, and I had a good night's sleep.

Having completed the preparatory desktop studies, we could instantly commence our ground works. Midway through, we discovered discrepancies in control points. With trembling hands and a shaky voice, I had to inform my immediate supervisor. He was, of course, convinced with the inconsistencies and agreed to send a control team from the Topography Division.

After almost a month, another demarcation team of Amochhu Land Reclamation Project area and Amochhu LAP, led by Mr. Bijay Pradhan, joined us, adding to the already limited space, followed by Mr. Kinga Loday's team for the demarcation of Pekarzhang and Khareypuhu LAPs. The days went by, singing in the karabees (sometimes though) to relieve ourselves from the day's stressful works of convincing the disgruntled landowners.

Mr. Ugyen Tshering, commonly known as Rockbee, organized a New Year party. By then, eight students of Jigme Namgyel Engineering College (JNEC) had already joined us for their on-job-training (OJT), adding to the already surplus population in the team. And Mr. Kinley Wangchuk was one of them. Looking back, I realized how carefree (yamey?) he was then. He always had an excuse for not making up for the day. It was a grand celebration amidst the demanding

works. We deserved that treat.

In the final month, we had to shift our camp to the Public Works Division (PWD) area since MoEA wanted to commence the construction of MDP.

With so many details and features to be surveyed, the NCRP of Phuentsholing core took four months to complete. Although Phuentsholing Thromde is considered one of the towns with no proper records and system, the exercise was completed without any major problems.

Convincing people on planned boundaries was challenging. Landowners expected their lands to be surveyed as per ground occupation and as shown by them. This created more trapped land.

Another issue was aerial encroachment. The projection of windows and balconies of Bhutanese architectures became prominent with the increasing number of flats. This resulted in aerial encroachment both on adjacent private and State land. As a result, a few landowners did not accept the planned boundary.

With the completion of the much-awaited NCRP of Phuentsholing core, we were able to clear all the issues related to encroachment on State land. This also helped to streamline the land recording system of the important bordering town.

We were then summoned back to take up the demarcation work of Changzamqo unplanned area. My supervisor appreciated our works. He announced our success story in one of the Friday forums. Looking at my stature, maybe the landowners of Phuentsholing were not able to overpower me. He mentored me in report writing, and I am still grateful to him.

This doesn't end my NCRP story. The worst part about it is refunding the hard-earned TA/DA. The Royal Audit Authority has issued a memo against our team for having claimed the full DSA. We justified our part, but to no avail. And the very ground of rejection of our justification was that my response to the auditing team's interrogation was harsh. I was being truthful from my part and said that we claimed the same amount as done for the whole NCRP project because the amount we spend the subsequent months doesn't diminish, as it should have been as per the Bhutan Civil Service Rules and Regulations (BCSR) rules. Nevertheless, we managed to refund the excess DSA. This is how we were paid for our hard works.



Style in the East - Tika Chhetri, GIS Technician II

Communication is an essential part of our daily life. It is a medium of sharing ideas, information, opinions, facts, feelings, and experiences. The bridge of human relations can either be created or destroyed by language. It either integrates or differentiates our very existence within society. As such, I have fond memories of SHARCHOKPA during the NCRP. A Lhotshampa brought up in Paro merely heard any Shar chopka words other than the song "Tabu cholay Mawa Zamlingga."

Let me now take the privilege to share and explain the so-called "language barrier" from my dictionary. Unlike in movies, this is not fiction, and it is not purely coincidental.

Samdrup Jongkhar

I was assigned to one of the purest Shar chop villages. A public meeting was the first thing we would do. I was impressed to see the humblest and quietest gathering like never be-

fore. No one uttered a word. People were very disciplined. It was inspiring to note how sentimental they were about the land.

After the meeting was over, the Tshogpa came to me and praised my command over Dzongkha. He also informed me that people hardly understand Dzongkha. I was quick to realize why the people were calm and composed. He simply praised me as, "Where there are no trees, the chilly tree is the Burj Khalifa."

With much difficulty, we prepared a work plan. After surveying the two plots on the first day, the survey of the third plot was hell. There was a dispute. The parties were agitated. They came to me. I was given an in-depth explanation of the issue. They drew sketches on the ground. Comprehending the sketches and their actions, I at least understood that the relatives were having boundary problems. The only words I knew at that time were "Gila" and "Digpa"

only. Out of those two words, I did not know which was "OK" and which was "YES."

To my ears, their speech was like putting a few marbles in an empty vessel and shaking hard to enjoy the melody. My misery was the Tshogpa's pleasure. He said I was saying "OK" to both parties, and they were confused. I was numb and dumb. After interpreting their sign language and sketches, I shared my thoughts in Dzongkha. Now it was their turn to be numb and dumb. The case was kept pending to review later on by calling my superiors and Gewog authorities. I declared my day off the next day. The next day, I took a class from the owner of my house. To my rescue, she knew some Dzongkha. I still remember the chart that I prepared for Sharchop-Dzongkha translation. I laminated it with transparent sellotape. The words were pretty simple ones like Gata, Dongra, Nye-ta, Thata, Zor, Sharang, etc. I had about 76 words. To me, the chart was more significant than the total station. I was engineering Sharchopa bit by bit. At times, I would forget the chart, and my Sharchop would be like Brownian motion. I also knew that if I found some beautiful ladies, I should call them "Mathang." As I was coping with Sharchop, one staff member was sent to help me. He was a champion in Sharchop. I was happy about my achievement of learning broken

Sharchop. I no longer required the translation chart.

Pemagatshel Dzongkhag

This was during the NCRP Spillover Activities time. By now, I fairly understood the Sharchop language. It was during the monsoon. I had a craving to eat mushrooms. I told my host that I wanted to eat "Mangphung," which I meant mushrooms. He prepared cucumber salad that day. Once again, I told him that I wanted to eat "Mangphung" curry. He cooked cucumbers in Bhutanese style. It did not taste right to me. A few days later, I told him that I wanted to eat "Mangphung," which I meant mushrooms. That time, the host might have thought that I liked some masala curry. So, they prepared cucumbers in masala. I must say, it was too bad. One fine day, I saw them cleaning some mushrooms. I said, "E ning khening gaira ji auru zalay yekpa mai." Just imagine the laughter we had after I learned that mushrooms are known as "Ba-mung" and cucumbers are "Mangphung."

Today, I can proudly speak Sharchopa. However, if you only speak to me in Sharchopa, then it is good; otherwise, you would find loopholes. Perhaps the structure and phrases will be wrong, but the meaning will certainly be conveyed.

During the first phase, plots located



The Spillover Activity, Another Opportunity

- Chimi Dem, DCSE

in far-flung isolated areas and having technical limitations were categorized as Transformational Plots (TP). The acronym means that the cadastral plot surveyed during the New Sathram Compilation Survey (NSC) shall be updated after transforming from the Everest coordinate system to the Drukref03 coordinate system. However, it wasn't accomplished as the desired accuracy was not achieved. The plots categorized as TP were issued without maps in the new Lagthrams. As the number turned out to be huge, it was thus decided to carry out another round of cadastral resurvey program called the NCRP Spillover Activity. It was carried out from 2013 till 2014 for all 20 Dzongkhags, starting from Lhuntse and concluding in Paro. A number of pending cases were resurveyed, which were mostly TP and absentee cases from the first round. Some of the unresolved disputes resolved

after the NCRP were also attended, but no dispute settlement committee was instituted during the spillover exercise.

By the time the Spillover Activity was about to commence, the use of GNSS-RTK in cadastral surveying had gained popularity. In the first round, the use of Total Station in the thickly vegetated areas and far-flung areas with limited control points proved to be less effective. This resulted in keeping about 30% of the plots as TP to accelerate the TP survey. NLCS produced many sets of GNSS-RTK for the intended purpose.

The extension was anticipated to tackle a significant portion of the pending cases, yet it was projected to be notably demanding and laborious compared to the initial round, owing to the isolated locations and past grievances. The management, supervision, monitoring, data check,

and integration were by and large difficult as a single coordinator had to manage everything. More than 100 surveyors and 15 Land Record officials were deputed to the field for the Spillover exercise. The teams were divided into two groups, each consisting of about 50 surveyors and 8 RPs. A coordinator had to manage and supervise all those surveyors and LPs. The same team was managed by around 10 RPs during the first round.

Surveying a contiguous area of 100 plots proved to be considerably simpler and more convenient than surveying a few individual TP plots. The process of surveying a single TP plot required more time due to varying circumstances. Certain tasks that needed to be completed before initiating the survey encompass:

- ◊ *Drawing reference from the NCRP map to determine the presence of shared boundaries and potential overlaps.*
- ◊ *Some of the TP plots don't have maps. For such cases, the plots cannot be surveyed unless the local authorities authenticate the true location.*
- ◊ *The majority of TP locations lack control points. Surveying cannot commence until the control team arrives on site.*
- ◊ *Regular upkeep of instruments*

and laptops is necessary to address frequent malfunctions caused by wear and tear.

In addition, there were a number of grievances from the first round. While some were genuine, others were pre-empting opportunities. The YZ genuine and illegal Khimsa categories were also limited to a few genuine authenticated cases as people by then were aware of the criteria, and there are chances that they would manipulate. Strict verifications were put in place for such case types. With the exception of the TP category, all remaining cases were subject to a nominal service fee in accordance with the provisions outlined in the Guideline for NCRP Spillover Activities.

Prior to initiating the task, individuals were summoned for a public meeting. Each instance of conducting such a meeting brings about mixed feelings. While the initial round of the program garnered significant benefits for the public, resulting in genuine appreciation and gratitude for the cadastral resurvey program, some also lodged accusations against the agency for inadvertent mistakes made by officials. While certain individuals voiced concerns about favoritism and nepotism displayed by the surveyors, others went as far as to claim that corruption existed within the system and that fairness

was non-existent. Nevertheless, our confidence remained steadfast in the conviction that our actions brought about more benefit than harm. Our intent was resolute in addressing all land issues definitively, as Commanded by His Majesty.

On the whole, the Spillover Activity played a vital role within the NCRP, making the program significantly incomplete without it. Many landowners received another round of opportunity to survey their land and resolve issues that remained pending, significantly contributing to the estab-

lishment of a strong and reliable national Cadastre system. Additionally, it offered learning and job prospects to over 150 contract officials within a span of two years.

On a personal level, it assisted me in obtaining and cultivating my leadership and managerial abilities, given my role in overseeing a substantial team. I have particularly learned that handling people is not as easy as handling machines. One must be kind, empathetic, assertive, firm, and resilient to bring everyone on board and generate the desired output.