CAAN SOUVENIR 2018

20th Anniversary

Civil Aviation Authority of Nepal (CAAN)

Babarmahal, Kathmandu

The Prime Minister

KATHMANDU
NEPAL

Message

I am glad that Civil Aviation Authority of Nepal (CAAN) is completing 19 years of its service to the country with a great sense of accomplishment. On the auspicious 20th anniversary, I would like to congratulate the aviation sector regulator and the entire aviation fraternities.

It is pleasing to note that CAAN has played an important role for the development of aviation industry, tourism, and the overall economy of the country. I am confident that it would play an instrumental role in materializing our collective aim of 'Prosperous Nepal, Happy Nepali' by developing and expanding country's aviation sector.

In a mountainous country like Nepal, aviation is the basic infrastructure of tourism. The country, well known for its flora, fauna and scenic beauty, is being considered as one of the must-see tourist destinations of the world.

We need to be ready for pragmatic arrangements in terms of policy and technical aspects in order to maintain the international standards in civil aviation. We are at a crucial juncture-the government has speeded up the process of enhancement of aviation infrastructure in the country. Government owned Nepal Airlines Corporation and private aviation companies are adding new aircrafts to their fleet and increasing the number of flights at both domestic and international levels. At the same time, the number of foreign tourists is going up significantly. The country is all set to welcome two million tourists in 2020.

The International Civil Aviation Organization (ICAO) has recognized that Nepal has made significant progress in terms of air safety and presented its council certificate. However, we still need to put extra efforts to get country's name delisted from the European Union's safety concern list. I would like to note that CAAN is making progress together with international aviation bodies to make the air transport safe and up to the standard.

CAAN has the responsibility to implement the national civil aviation policy, create enabling environment for the private sector airlines companies, introduce air safety measures and adhere to the ICAO principles-the Convention and its annexes. On behalf of the Government of Nepal, I would like to reassert our firm commitment towards the guiding principles of the Convention on International Civil Aviation.

I extend my warm greetings and best wishes to CAAN.

December 26, 2018

K.P. Sharma Oli

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MESSAGE

I am pleased to express my congratulations and best wishes to the Civil Aviation Authority of Nepal (CAAN) on the twentieth anniversary of its establishment. In the past 19 years, CAAN has handled an immense responsibility in terms of air transportation together with increasing connectivity and contributing to the economic activity of the nation.

For a mountainous country like Nepal, aviation plays a crucial role in passenger and cargo transportation to remote areas. It has contributed to the development of far flung areas as major tourist destinations in Nepal with increased accessibility and has supported in the economic progress of those areas. In recent years, aviation sector in Nepal has witnessed a rapid change and progress and the number of airlines companies has also remarkably increased.

We are celebrating 2020 as Visit Nepal Year with a minimum target of annual two million international arrivals. CAAN has additional responsibilities to make the aviation sector safe and well-equipped. Some landmark projects like construction of Gautam Buddha International Airport is nearing completion while the construction of Pokhara Regional International Airport has gained a momentum. Expansion and up-gradation of Tribhuvan International Airport and other domestic airports are in speedy progress. Similarly, we have expedited ground works for the construction of much-coveted Neejgadh International Airport. These large aviation infrastructure projects will be instrumental in transportation, connectivity, tourism and economic progress.

I would like to appreciate CAAN for its commendable role in developing airports and efforts to uplift the aviation industry in Nepal. Flight safety assurance and sustainability of civil aviation is the prime concern for a regulatory body like CAAN. Nepal is strongly committed to comply with the safety standards issued by the International Civil Aviation Organization (ICAO). Government will leave no stone unturned to ensure air safety by adopting the international standards in collaboration with the airline industry, ICAO and other concerned bodies. Nepal has made significant improvement in terms of air safety which has been duly recognized by the ICAO.

I extend my appreciations to the employees of CAAN, airline industry and all concerned organizations and individuals in the aviation sector and wish CAAN family every success in their future endeavors.

Rabindra Adhikari

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Message

I am extremely delighted to extend heartfelt congratulations to the Civil Aviation Authority of Nepal (CAAN) on its 20th Anniversary. CAAN has played an important role and contributed to the development of aviation industry and tourism.

CAAN has an immense responsibility in terms of air transportation. Aviation is the main mode of transportation in many hill and mountain areas. A good network of reliable airports can serve the country in need of disasters and calamities which was aptly proved during the earthquake in 2015. Air service played an important role in rescue and relief operations.

In an attempt to ensure air safety and security in the country, CAAN has played a significant role in adopting international aviation safety measures and facilitating the airlines service provider in operating their business in the country. Safe and secure civil aviation facilitates tourism development, economic upliftment of people and employment generation.

Government of Nepal has given special attention to infrastructure development in order to facilitate economic and social development. Second International Airport in Bara is on the offing, and regional international airports in Pokhara and Bhairahawa are being constructed. Once completed, these airports will open new avenues for tourism, aviation and economic development in the country. SIA have the potential to a transit for the long haul international flight while Bhairahawa and Pokhara airports will help to carry tourists to the two most famous touristic destinations in the country – Lumbini and Pokhara. New international air routes will be functional in the near future.

I would like to appreciate the contribution of CAAN in the development and expansion of civil aviation in Nepal. At the same time, it should be working to transfer the latest technology in aviation safety and security in order to make Nepali sky safer. I am optimistic that CAAN will enhance its capability with support from the government, ICAO and other concerned organizations to cope with emerging challenges facing the civil aviation sector.

I wish CAAN every success in its future endeavours.

December, 2018

(Dhan Bahadur Budha)

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Message

On the occasion of 20th anniversary, I extend my warm felicitation to the Civil Aviation Authority of Nepal (CAAN) and its employees and express our sincere gratitude for strengthening civil aviation safety in Nepal.

I am also delighted to know that CAAN has continued the publication of CAAN Souvenir and hope that it will be a useful publication for the aviation and tourism sector. The Souvenir can be a medium for sharing ideas, knowledge apart from being a tool of information dissemination.

It is the matter of pride for us that ICAO recognized the efforts of Nepal for its progress in resolving aviation safety oversight deficiencies lift from Significant Safety Concern list. I am confidence that our performance in line with ICAO recognition will help ensure ICAO SARP implementation in maintaining aviation safety.

A robust aviation network is a prerequisite for the growth of tourism industry of Nepal. In addition, we are celebrating 2020 as Visit Nepal Year with a target of annual two million international arrivals to convey the message to the international stakeholders that Nepal is fully recovered and geared to provide all kind of services to our valued tourists.

The Government has always accorded high priority to the aviation sector development. An effective mechanism has been set up for the ugradation of Tribhuvan International Airport, expansion of Gautam Buddha Airport in Bhairahawa, construction of regional international airport in Pokhara, and construction of Second International Airport in Nijgadh in southern Terai.

On this special day, I urge all concerned individuals and agencies to maintain their harmonized effort for safer and secured aviation in the country.

(Krishna Prasad Devkota)
Secretary

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Message for the 20th Anniversary of the Civil Aviation Authority of Nepal

On the occasion of this year's celebration of its twentieth anniversary, I am greatly honoured to convey on behalf of ICAO our sincere wishes to the Civil Aviation Authority of Nepal.

The ICAO Regional Office for Asia and Pacific considers Nepal an important partner of the international civil aviation community and I convey my gratitude to the Civil Aviation Authority of Nepal, and all of the colleagues and partners, for their contribution to make international civil aviation a stimulus for economic and social growth maintaining, at the same time, high standards of safety and security in all critical areas of aviation.

May I take this opportunity to express my warm wishes and assurance for the continued and full cooperation at all times from the ICAO Regional Office for Asia and Pacific.

With warmest regards.

Arun Mishra
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Message

The aviation sector in Nepal is observing a tremendous change–number of aircrafts, flights and passenger and cargo movement are increasing while the arrival of international tourists has witnessed a significant rise. Among these positive signs, the Civil Aviation Authority of Nepal (CAAN) has completed 19 years of its existence and service to the Nation successfully and is celebrating twentieth anniversary on 31st December 2018. On behalf of CAAN, I feel privileged to extend my sincere felicitations and warm greetings to all our stakeholders, clients, valued travelers, organizations, donors and other concerned parties in Nepal and abroad. Each of you have contributed to the progress that the country made in the development and expansion of civil aviation sector. I am hopeful that your support would be continued in the days and years to come.

The resolution of significant safety concern, the attainment of safety compliance rate well above GASP target and subsequent recognition by ICAO in the form of Council President Certificate are the key achievements of Nepal in year 2018. Nepal has developed Nepal Aviation Safety Plan (2018-2022) in line with ICAO Global Aviation Safety Plan and commenced activities related to setting up of safety foundation for structuring up a firm SSP in faster pace.

Modernization efforts in Air Navigation such as increase of communication coverage through the installation of RCAG data link, operation of MSSR-Mode S Radar Systems and implementation of RNAV terminal application in four major airports including TIA has enhanced air safety, efficiency as well as traffic capacity significantly. Four ADS-B sensors are being installed at major domestic hub airports throughout the country and being connected with existing Radar Multi Sensor Data Processing System (MSDPS) to extend the surveillance service as well as to serve as a backup to the existing MSSR system by 2019.

The country is making rapid advancements in aviation infrastructure across the country. The up gradation work at Tribhuvan International Airport is underway with expansion of terminal building and apron. The construction of Gautam Buddha international airport will be completed by the mid of 2019 and will come into operation as the second international airport of Nepal by the end of 2019. This will support the Visit Nepal 2020 target of Government of Nepal to cater two million tourists. The construction of Pokhara Regional international airports will be completed by July 2021. Development of DPR of Nijgadh International Airport, the largest airport of Nepal is in the process. Similarly, expansion and modernization of major domestic aerodromes and STOL airport are also being carried out.

While the aviation sector regulator is entering to the 20th year of its existence, CAAN would like to express its commitment to ensure safe and secure aviation, continuous development and modernization of infrastructure and efficient operations of air transport services. I would like to thank the publication committee for their valued contribution to bring this 'CAAN Souvenir' before the public. I am also thankful to all members of organization, stakeholders, patrons and well wishers for their support.

(Sanjiv Gautam)
Director General

Editorial

The year 2018 has marked with historical developments in Nepali tourism sector with about 1.2 million tourist arrival, eight-fold increment in Nepali air passengers' insurance, organization of International Buddhist Conference in Lumbini, announcement of new 100 tourism destinations across the country, significant progress at the Gautam Buddha International Airport and Pokhara Regional International Airport, and preparations for the Visit Nepal Year 2020.

Nepal strives to achieve the goal of achieving 2 million tourist arrival target by 2020 and increasing the tourism sector's contribution to the Gross Domestic Product (GDP) to 10 per cent from the current about 3 per cent. Though these targets look ambitious, we are geared up to achieve them. The insured amount of passengers flying to and from Nepal has reached Rs. 17.48 million in case of death or fatal injuries from Rs. 2.3 million with the implementation of Montreal Convention 1999. Nepali Parliament had approved the convention in August this year.

Civil Aviation Authority of Nepal (CAAN), the aviation sector regulator in the country, is celebrating its 20th anniversary among these positive developments which will have significant impact on the aviation and tourism sector. As we are impatiently waiting to welcome the New Year with lots of joy and festivity and celebrate the CAAN Day on the eve of the New Year when year 2018 is saying farewell to us, we need to cherish the progress and achievements made to rejuvenate the tourism industry.

Aviation safety in Nepal has always been a contentious issue, and 2018 has marked a positive change in this area. The International Civil Aviation Organization (ICAO) has awarded Nepal with the ICAO Council President Certificate in recognition of Nepal's achievement in resolving the air safety oversight deficiencies and effective implementation of ICAO safety standards.

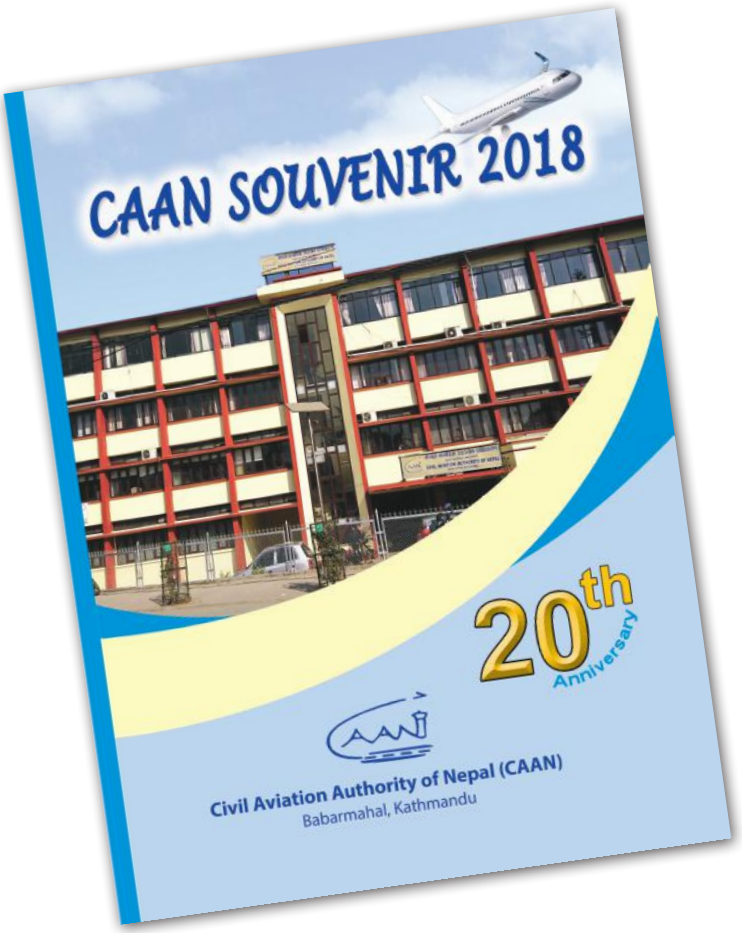
CAAN has put its utmost and sincere efforts to make the Nepali sky safer. Our Safety Oversight Capability (SOC) has been visibly improved after the ICVM of ICAO in July 2017. On this joyful moment of celebration, we would like to express our commitment that in order to make the achievement sustainable, continuity will be given to the flight safety reform, and CAAN's SOC will be strengthened in cooperation and collaboration with the regional and international aviation organizations.

We will continue to put our efforts to implement reforms. In order to make the air travel more reliable, lapses and weaknesses related to air safety, as pointed by the ICAO and European Union, will be addressed with better utilization and mobilization of available resources. We, at CAAN have been working day and night to meet the aviation infrastructure deficit and address the loopholes in Air Safety management.CAAN has the responsibility to implement the national civil aviation policy, create enabling environment for the private sector airlines companies, introduce air safety measures and adhere to the ICAO principles.

To make the anniversary celebration more special, we have published the 'CAAN Souvenir 2018' including articles, experience and opinions from various aviation sector experts, engineers, former officials, professors, journalists and other stakeholders. We feel very proud and satisfied while presenting this publication in your hands.

The Souvenir Publication Committee would like to express its sincere gratitude to writers and contributors, and other individuals for their invaluable support and suggestions.

Wish you all a very happy and prosperous New Year 2019 !



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Strengthening of Aircraft Accident Investigation Organisation

Rajesh Raj Dali
Former DG, CAAN

Background

The world air transport has contributed major impact in global economy. The projected worldwide future air traffic growth need to be address by planning improvement in aviation safety at the international, regional and national levels to maintain safe, efficient and economical flight. International Civil Aviation Organisation (ICAO) with 192 member states is continuously working on making global sky safe.

The Global aviation safety plan (GASP) of ICAO has developed a strategy which includes program for States to meet through the implementation of effective safety oversight systems, State safety programmes (SSPs) and predictive risk management and accident prevention. The GASP is a high level, strategic, planning and implementation policy document developed in conjunction with the Global Air Navigation Plan. Both documents promote coordination of international, regional and national initiatives aimed at delivering a harmonized, safe and efficient civil aviation system.

ICAO tried to achieve a balance between assessed risk and the requirements of achievable and effective risk mitigation strategies to reduce the accidents. The accident reports and related risk factors are considered for enhancing safety. For this the accident investigation authority must be very much efficient and effective and USOAP needs to audit in the area of accident investigation of each States.

Requirement of accident investigation organisation

Article 26 of ICAO convention with the title of Investigation of accidents states as follows:

"In the event of an accident to an aircraft of a contracting State occurring in the territory of another contracting State, and involving death or serious injury, or indicating serious technical defect in the aircraft or air navigation facilities, the State in which the accident occurs will institute an inquiry into the circumstances of the accident, in accordance, so far as its laws permit, with the procedure which may be recommended by the ICAO. The State in which the aircraft is registered shall be given the opportunity to appoint observers to be present at the inquiry and the State holding the inquiry shall communicate the report and findings in the matter to that State".

To support the member states to implement the article 26 of Chicago convention, ICAO has established Accident Investigation Panel (AIGP) with the following term of reference.

a) Develop and maintain provisions for accident/incident investigations in support of the GASP;
b) Consider new procedures, techniques and methodologies for investigations, proposing amendments to provisions and guidance as necessary;
c) Review Attachment E to Annex 13, along with other relevant provisions, and determine measures to enhance the protection of safety information gathered during investigations;
d) Identify the category of serious incidents that could be precursors to, or associated with the types of accidents having the highest rate of fatalities (e.g. LOC-I; CFIT; runway incursion/excursion);
e) Consider methodologies to assist States with limited resources to conduct large scale investigations, including regional accident and incident investigation organizations (RAIOs);
f) Consider strengthening protection of accident and incident records, including development of guidance on protocols and agreements between accident investigation authorities and judicial authorities; and
g) Progress provisions for accident/incident investigations involving remotely piloted aircraft systems (RPASs).

Aircraft accident investigations also provide evidence of hazards and/or deficiencies within the aviation system. A well conducted investigation should identify all systemic causes of an accident and recommend appropriate safety actions to avoid the risks or eliminate the deficiencies. The investigation may also reveal other threats and inadequacies within the aviation system not directly connected with the causes of the accident. Thus, the report of a truthfully conducted accident investigation may be a dynamic method for accident

prevention. The recommendations for improvements to the crashworthiness of the aircraft are aimed at preventing or minimizing injuries to aircraft occupants in future accidents. So states should have strong and independent accident investigation organisation.

Global data on Aircraft Accident:

The accident data published by ICAO known to them are in following table

Year	Accident	Fatalities	Fatal Accident	Departures	Accident Rate /Mil Departure
2008	139	523	22	29552959	4.703
2009	116	695	18	28471294	4.074
2010	128	768	22	29768971	4.299
2011	125	422	19	30755303	4.064
2012	98	386	11	30950512	3.166
2013	90	173	9	31370638	2.869
2014	97	911	8	32060971	3.025
2015	92	474	6	33062808	2.783
2016	75	182	7	34759953	2.157
2017	88	50	5	36348123	2.421
2018	75	492	8	75951026	0.987

Source: ICAO data

In 2017, out of 4.1 billion passengers travelled by air worldwide, total 50 fatalities in scheduled commercial departures are recorded showing the global fatality rate of 12.2 fatalities per billion passengers, representing the safest year within past ten year on the record for aviation. The massive growth in air traffic in 2018, when combined with the number of accidents, resulted in a lowest global accident rate of 0.987 accidents per million departures. The accidents records are of aircraft with a certificated maximum take-off weight (MTOW) of over 5700 kg.

ICAO is always dedicated on its safety priorities which includes Runway Safety, Controlled Flight into Terrain (CFIT), Loss of Control-Inflight (LOC-I) while continuing to promote new safety initiatives. ICAO is committed to improving aviation safety through teamwork with regional organizations, such as Regional Aviation Safety Groups (RASGs), Regional Safety Oversight Organizations (RSOOs) and Regional Accident and Incident Investigation Organizations (RAIOs). The ICAO Universal Safety Oversight Audit Programme (USOAP) Continuous Monitoring Approach (CMA) measures the implementation of Standards and Recommended Practices (SARPs) and Procedures for Air Navigation Services (PANS) worldwide. The global average effective implementation (EI) increased from 64.7% in 2016 to 65.5% in 2017. The 69.19% of the member states have achieved the target of 60% and above EI, as suggested by the GASP 2017–2019. ICAO is working in partnership with the international aviation community to achieve future safety improvements, with an emphasis on improving safety performance through standardization, monitoring and implementation.

Structure of Accident Investigation

In conformity with Article 26 of the Convention it is mandatory that the State in which an aircraft accident occurs need to establish an inquiry into the accident. This obligation can only be met when suitable legislation on aircraft accident investigation is in place. Such legislation must institute an independent accident investigation authority (commission, board or other body) for the investigation of aircraft accidents.

The accident investigation authority must be strictly objective and totally impartial and that it can withstand political or other interference or pressure. Many States have achieved this objective by setting up their accident investigation authority as an independent statutory body or by establishing an accident investigation organization that is separate from the civil aviation administration. In these States, the accident investigation authority reports direct to Congress, Parliament or a ministerial level of government.

In some States where a permanent accident investigation authority is not established, they generally appoint a separate accident investigation commission for each major accident to be investigated. Such a commission report direct to a ministerial level of government so that the findings and safety recommendations of the investigation are not diluted during passage through regular administrative channels.

The accident investigation authority is required to determine the causes of an accident and to make safety recommendations. However, responsibility for the implementation of safety recommendations should rest with the civil aviation administration.

ICAO encourages States to foster regional aviation safety groups which may include aircraft accident investigation matters, such as the delegation of investigations or parts thereof or enlisting the mutual assistance and cooperation of States in an investigation.

Personnel

Aircraft accident investigation is a specialized task, which should be conducted by qualified investigators. If any States which do not have qualified accident investigation personnel, they should be identified and trained in accident investigation techniques prior to being assigned to accident investigation duties.

The investigation of an aircraft accident is an enormous task that is almost unlimited in scope. The more often investigators participate in investigations, they gain more experience, they soon realize that the need to increase their knowledge and upgrade their

skills. While training is essential, improvement in an investigator's capabilities generally results from a personal commitment to excellence. Since the outcome of an accident investigation is largely dependent on the skill and experience of the investigators assigned to it, at least one experienced investigator should be assigned to each investigation to ensure an adequate level of experience.

It is essential that accident investigators have a practical background in aviation field acquired by working in specialized areas of aviation such as management, operations, air traffic services, airworthiness, professional pilot, meteorology and human factors. Since accident investigations will often involve all of these specialized areas, it is important that investigators understand the aviation infrastructure and are able to relate to each of these different areas. It is also beneficial for investigators to have some piloting experience in addition to their other expertise.

In addition to technical skills, an accident investigator requires certain personal attributes. These include integrity and impartiality in the recording of facts, logic and perseverance in pursuing inquiries, often under difficult or trying conditions, and tact in dealing with a wide range of people who have been involved in the traumatic experience of an aircraft accident.

To effectively discharge their duties, accident investigators should be granted suitable statutory powers, including authority over an accident site, possession of evidence, the right to test anything seized and the right to obtain relevant documents. These powers should, however, only be used when necessary and with the utmost discretion. Investigators should realize that during the initial part of an investigation their task is essentially one of gathering information which is best undertaken in an atmosphere of cooperation.

Equipment

Accident investigators should have their investigation field kits and essential personal items packed as well as the necessary personal protective equipment against biological hazards should be ready so that they can proceed without delay to the accident site. Proper planning and preparedness are essential in facilitating the prompt arrival of investigators at an accident site and have considerable bearing on the efficiency of the investigation.

Accidents are apt to occur anywhere: at airports, in mountains, swamps, deeply wooded areas and deserts. Hardships are often encountered in reaching accident sites in remote areas. It is therefore important that investigators be physically fit and that working equipment be selected with consideration to terrain and weather.

Clothing should be comfortable and afford protection against the conditions or elements that may be encountered. Spare clothing may also be required. The most essential items of personal clothing are good footwear, a wind-proof and waterproof jacket and trousers, and appropriate headgear. The investigator should wear suitable boots which provide protection against the hazards at the accident site. Specifically, the boots should provide protection against crushing and piercing injuries and should be waterproof and oil and acid resistant. Protective items, such as sun block, anti-glare spectacles and insect repellent, should also be available.

Before proceeding to the accident site, investigators should have adequate supplies and equipment most appropriate to the territory to be covered (food, water, first-aid kit, camping gear, communication equipment, etc.) and should have a competent guide if it is necessary to enter wild or rugged terrain.

The investigation field kit should contain sufficient equipment to enable examination of the wreckage, the plotting of impact points and wreckage patterns, parts identification and the recording of observations.

Legislation

Appropriate legislation that defines the rights and responsibilities of the aircraft accident investigation authority is required. The accident investigation authority should, through legislation, have immediate and unrestricted access to all relevant evidence without requiring prior consent from judicial bodies or other authorities. Accident investigators should be aware that aircraft accidents may be subject not only to technical investigation but also to some form of judicial inquiry. However, accident investigation procedures should not be constrained by judicial processes. The national legislation and regulations should specify the procedures to be followed in order to keep the technical investigation separate from judicial or administrative proceedings. The legislation should make it clear that accident prevention is the sole objective of the investigation and should emphasize that it is not the role of the accident investigation authority to apportion blame or liability.

The legislation may also protect certain documents and information obtained in the course of an investigation from public disclosure.

Nepalese Perspective

As per ICAO requirement Nepal have its own legislature to cover up the accident investigation. The latest accident investigation regulation was of B.S.2071, which has provision of appointing a separate accident investigation commission for each major accident to be investigated. Nepal lies in the RASG-APAC of ICAO region and it is recommended to have permanent body

for accident investigation. This permanent body can act as per ICAO guidance and coordinate within region for the accident prevention. The last USOAP audit conducted in Nepal has reported 5 areas and 6 critical elements are above the target of 60% EI, where as in the area of accident investigation it was 18.28% EI. This report clearly indicate that Nepal have to improve in the field of accident investigation.

Following table shows the accident record in Nepal since 2008 A.D.

Year	Accident No.	Fatalities
2008	6	28
2009	2	1
2010	7	38
2011	7	19
2012	5	34
2013	5	1
2014	4	19
2015	4	4
2016	7	32
2017	6	3
2018	8	60
Total	61	239

Source: ICAO data

The data shows that every year there is average of more than 5 accidents per year. The accident prevention measures and exchange of safety information need to be developed for enhancement of aviation safety in Nepal. Because the investigation is a process conducted for the purpose of accident prevention which includes the gathering and analysis of information, the drawing of conclusions, including the determination of causes and, when appropriate, the making of safety recommendations. The sole objective of the investigation of an accident or incident shall be the prevention of accidents and incidents. In Nepal every time when accident takes place a separate accident investigation commission is established and investigation is started with new set of the office. Thus to strengthening the accident investigation organisation in Nepal, a new legislation should be developed for the establishment of permanent body which functions as per Nepalese law and guidance of ICAO for the safer Nepalese sky.

Recommendation

Following recommendation are suggested for the strengthening of accident investigation area of Nepal. Because safety is everybody's concern and safety is no accident.

1. To establish a system for the planning and management of aircraft accident and incident investigations, including a list of required activities, assigned responsibilities, detailed action, procedures and checklists for the conduct of investigation.
2. To establish a permanent body at the Ministry for the collection of information and notification of aircraft accidents and to conduct investigation without delay.
3. To establish a procedure for the participation in aircraft accident or serious incident investigation conducted by other States. When received a safety recommendation, the action will be taken as per prevailing law of Nepal.
4. To amend the related rules for the conduct of aircraft accident investigations to address the following procedures:
   a) to facilitate coordination between the investigator-in-charge and the judicial authorities;
   b) to inform to aviation security authorities if an act of unlawful interference was involved or is suspected;
   c) to assign at least one experienced investigator to each investigation to provide the required level of experience during an investigation;
   d) to preserve each evidence of a transitory nature of the wreckage through photography or other appropriate means;
   e) to read-out timely of the flight recorders, and the analysis of the data contained therein;
   f) to include advisers assisting accredited representatives in an investigation to the extent necessary to make the representatives' participation effective;
   g) to participate by the operator, when neither the State of Registry nor the State of the Operator appoints an accredited representative;
   h) to participate by the experts of States which have special interest in an accident by virtue to fatalities or serious injuries to its citizens;
   i) compliance with occupational health and safety legislation during the investigation process;
   j) the provision of relevant and timely information on the progress of the investigation to the families and accident survivors.
5. To establish aircraft accident and incident prevention measures including a mandatory incident reporting system to determine on actual or potential safety deficiencies.
6. To establish an accident and incident database in a standard format, compatible with the accident/incident reporting (ADREP) system for facilitating the effective analysis of information obtained.

References

A) ICAO published data.
B) ICAO Convention.
C) ICAO Annexes and Manuals
D) CAAN Published Documents
E) Published Accident Investigation Reports of Nepal

Understanding the EU Message

Tri Ratna Manandhar
Former DG, CAAN

The commercial aviation that commenced with a landing of a single-engine aircraft at Gauchar, Kathmandu in 1949, now has emerged as the most integral part of the nation, not only making possible to connect the people within and outside the country but also in stimulating the national economy. The country has a network of 49 airports, 34 being in regular operation. Continuous growth in air traffic is an encouraging aspect of Nepalese air transport. In recent past Nepal witnessed unprecedented air traffic growth. Last 7 months data show, on an average 19000 passengers travel through 342 landings and takeoffs in a day in Tribhuvan International Airport (TIA). TIA passengers which were 5.1 million in the last year reached almost 4 million just within the early 7 months of this year. In spite of those positive parts, Nepalese civil aviation is commented broadly in two aspects. One is poor aviation infrastructure and the next is poor safety record. Today on the occasion of the 20th anniversary of the Civil Aviation Authority of Nepal (CAAN) it is time to review, what we achieved and what we could not.

Poor Infrastructure

Nepal's air traffic growth remains far ahead in comparison to the growth in aviation infrastructure resulting in excessive congestion and delays in the only international airport of the country. Completion of the TIA capacity enhancement project and Gautam Buddha Regional Internal Airport is expected to bring a marked difference in Nepal's aviation scenario addressing most of the existing problems.

Safety Status

In the part of safety enhancement, Nepal failed to get rid of European Union (EU)'s safety list despite it attained 66% ICAO Audit compliance against the global average of 60%. Significant Safety Concern (SSC) tag was also removed by the ICAO. EU's continued operational ban has brought disappointment in the Nepalese aviation sector. Some expressed their frustration that EU should not be so rigid in its action. But again some opined that the process of improvement initiated in the aviation sector as a result of EU's pressure will be continued further. Nepal was under EU's safety list in December 2013. That created a pressure which brought visible impact in Nepalese aviation compelling the Government, aviation regulatory body CAAN and operating carriers to initiate corrective action seriously which would not have been the case otherwise.

As per EU, its assessment is made against international safety standards, and notably, the standards promulgated by the International Civil Aviation Organization (ICAO). But in contrary to the EU's claim, in the recent example of Nepal, it showed that EU safety listing is an independent evaluation having no connection with ICAO Audit. There are several countries that are not under EU safety list although their ICAO Audit compliance is below average.

Indonesian Example

All Indonesian carriers were put on the EU Air Safety List in June 2007 due to unaddressed safety concerns. EU ban appeared as the eye-opener to the Government. As a result, the government came into action immediately. In December 2007 a joint declaration was signed between the Government of Indonesia and President of ICAO Council. Several commitments were made on behalf of the government in the joint declaration. Commitments included restructuring of the regulatory body and enacting the legal framework to strengthen the safety oversight capability of the regulatory body, access to adequate financial and human resources for such activities. Accordingly, a massive restructuring was initiated in every aspect of aviation. Safety Management System was introduced not only in the airline operations but also in all service sectors including aerodrome operations, air navigation services. To foster transparency and a just culture in the aviation, voluntary reporting system was encouraged where all incidents and accidents were reported and investigated without fear for misuse of the safety-related information. "5 years quantum leap" program was launched by the National Carrier. As a result within a short period, Garuda Indonesia was able to transform itself into one of the best airlines in the world.

Impressed by the corrective actions initiated, 4 airlines including Garuda Indonesia were removed from EU safety list in July 2009. Four cargo carriers were released

in 2011 and 3 more airlines including largest airline of Indonesia, Lion Air was lifted of EU ban in 2016. In November 2017, the country's global flight safety rank raised from 151st to 55th among ICAO members, with a safety audit compliance level of 81.15%. Indonesia has more than 60 operating airlines. As a result of continued safety enhancement, on 14 June 2018, all Indonesian carriers were removed from the EU safety list. So it took 11 years for Indonesia to be completely out of the EU safety list. Ultimately the hard work and close cooperation paid off.

Lesson from Others Experience

So learning from the Indonesian experience, let us honestly evaluate ourselves whether the initiatives taken by Nepal were adequate?

Presently, CAAN is both the regulator as well as the service provider. It is said that as long as the CAAN is not separated into two entities, EU is not going to release its ban. But is it guaranteed that after restructuring EU will reconsider? Along with the safety oversight capability, EU's concern was service provision part of CAAN which is not regulated properly. In the aerodrome operation and air navigation services provided by the CAAN a lot has to be done. The most difficult part is the effective implementation of the safety management system. EU also has a reservation on Accident Investigation mechanism of Nepal.

Separation really essential?

The important question is the effective service delivery. If CAAN could have improved or deliver better services within the existing organizational setup, no separation would have been needed. In that case, the present structure with functional separation would be enough. However, will there be any guarantee that separation brings a positive change? It all depends on how the employees respond to the change and how they change their attitude. Otherwise, it is possible to develop more confliction when someone is regulated by their own colleague who had once been their own coworker. So this psychological aspect must be taken into consideration in the whole process.

Recent Achievements

CAAN has been able to remunerate the aviation experts at par with the industry standard. As such CAAN has obtained the services of several national and international safety experts to enhance its oversight capability. Definitely, there has been a marked improvement in regulatory compliances in many aspects.. Airline's growing awareness and commitment to safety, their increasing investment in safety enhancement and in strengthening their human resources capabilities are the recent achievements. Higher ICAO Audit rating is the result of those positive changes. However, in spite of all efforts, it is disappointing to note that accident and incident have not reduced. This is where EU was mostly concerned

Conclusion:

The continuation of Safety Tag is humiliating and this is sometimes linked with the Chinese aircraft that threaten European product. Besides some say that if Nepal Airlines had adopted Lufthansa as the strategic partner, scenario would be different because of the better lobbying. Thus along with the safety initiations, diplomacy also must move together. In absence of proper diplomacy, Nepal's effort will not be visible to the outside world and it will remain always in low profile. It was the diplomacy together with the safety initiations, Philippines could get out of the EU safety list within 3 years. Besides, on some websites, some of the Nepali Carriers are unjustifiable rated very low. We should also initiate to take remedial action as such websites may be generating a negative message.

MH370 and Nepal

Ramesh Man Joshi
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Flight MH370

Malaysia Airlines Flight MH370, a B777-200ER wide body plane, left Kuala Lumpur at 00:43LT on March 8, 2014 for Beijing of China. This ultra-modern jet with wingspan of 61 meter and 64 meter length, flying at 925 km per hour and 239 persons from fourteen (14) countries just vanished into air after just over two hours of flight heading north. It is still lost. It is presumed that aircraft then made a U-turn. That is all. Four years and nine months have passed. But the whereabouts and the reason for its disappearance have made not only the aviation stake-holders, but the whole world mesmerized as never before.

Search for the Aircraft

Now, Chief of the Search team, Commissioner of Australian Transport Safety Bureau, has formally announced the end of the Search Exercise until a new leadof substantially reliable of locating the aircraft, announcing that, "They are no closer to knowing the reason for the plane's disappearance, or its probable location. Of course, Malaysians are left with a big dilemma as to "What next?"

Relation between Malaysia and Singapore has turned sour now regarding the responsibilities and boundaries between their Search and Rescue Regions. Prime Minister of Malaysia Mr. Mahathir has quoted-"We have come to a stage where we cannot keep searching for something we cannot find". Chief of Civil Aviation Authority of Malaysia Mr. Azarudim Abdul has resigned on the ethical ground.

The rest is history, without an end. The saga of the search exercise, if written event by event, will be much longer than the epic of Ramayan or Mahabharata.

One good thing that came out of this search exercise is the creation of a very high level of camaraderie among the nations surrounding the search area a well a USA, UK, France and et al.

Hundreds of aircraft, hundreds of ships, thousands of search hours and a great amount of money and energy have led us to nowhere, not to mention the mental stress caused on the part of all the experts as well as families of the passengers. More than 25000 aircraft are in the air at any given moment around the globe now. Despite the immense development of science and technology in aviation it is now well realized that we still have a lot to go.

Minimum of procedures for 192 member countries of ICAO have been well laid out in its Annex 12 Search and Rescue. IAMSAR Manual for search of even vessels are now encompassed and in place.

The ordered, anxiety and frustration of the relatives of 239 ill fated persons still persists and is not going to end now or in the near future, even after four yearsand nine months of this baffling incident.

Only version the authorities and the experts could say is "Sorry, maybe it is deliberate and calculated." Foul play is not ruled out yet.

The entire passenger's background was checked. They all came out with a clean bill of health.

Relatives of the passengers of MH370 are far from being satisfied. They have now called for renewed search for the missing jet.

The mystery of the disappearance of MH370 has brought forward a series of possibilities, such as, aircraft airworthiness, communication, navigation and surveillance system, security in aviation, possibility of the connivance of experts to keep the aircraft out of the radar screen to remain hidden, pilot gonerouge or psychological problems, collusion among the terrorists to cargo and food, served, hijacking, sabotage, and so on.

MH370, Kuala Lumpur to Beijing, a north bound flight, is lost. Yet, the major portion of search were conducted far south and south west of Kuala Lumpur around the Indian Ocean. How come International air transport is tricky in more than one sense? One such issue to be taken of is to search a missing aircraft in an international territory-sea or land. International Civil Aviation Organization (ICAO) have solved this problem too-by designating a particular Contracting State to be responsible for area much beyond its political

boundary, so that whole earth's surface is covered.

After scouring South China Sea and area around the Malaysia Peninsula, and a hint from a satellite that the aircraft made a U-turn somewhere over South China Sea, the experts were somewhat certain that it headed south towards Indian Ocean and the probable splash point in the search area happen to fall inside the Perth (Australia) Search and Rescue Region (SRR). Hence, Australia is on the forefront to this day.

Australian SRR, happen to covers 11 percent of the world's airspace, 51.7 million sq.km. stretching from 2oS to 90oS in latitude and 75oE to 163oE in longitude, 430 times the size of Nepal.

Search and Rescue in Nepal

Nepal is responsible for Search and Rescue of aircraft in emergency and its occupants within the Nepalese SRR which have been declared to be the same as the political boundary of Nepal.

Fairly well established Rescue Coordination Centre (RCC) to cater for the whole country is located at Kathmandu Airport. As prescribed by ICAO, Civil Aviation Authority of Nepal (CAAN) have laid out all regulatory provisions as well as logistics for the operation of this Centre, 24 hrs a day and 365 days a year if need be.

It is just another story that a MI-17 Helicopter that went missing east of Lukla more than 15 years ago and another Helicopter (Bell-BS203), that went down the Rara Lake more than a decade ago, could not be located to this date despite all possible efforts by the concerned authorities to find them.

Without going into further details, suffice it to say that while CAAN must be ready to act abreast of the latest developments in Search and Rescue, the challenge to timely update the regulatory provisions as well as functioning of the Search and Rescue facility in Nepal must be made well equipped and managed.Regular exercises must be conducted as demanded by ICAO with all the participatory bodies, such as, Ministry of Home Affairs, Ministry of Health, Ministry of Defense, adjacent SRRs, Affiliatory entities, such as, Airlines, Mountain Rescue Organization, etc. Regular training for all concerned is of utmost importance.

Capacity of Airports and TIA

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1 Introduction

Capacity of Airports generally refers to the ability of an airport to handle a given volume of traffic (demand). Generally speaking, the higher the demand in relation to capacity, greater the delay.

There are two commonly used definitions of airfield capacity: (a) throughput. (b) practical capacity. The 'throughput' definition of capacity is the rate at which aircraft can be handled without any delay. This definition assumes that aircrafts will be present waiting to take-off or land and capacity is measured in terms of the number of such operations that can be accomplished in a given period of time. 'Practical capacity' is the operations(takeoffs and landings) that can be accommodated with no more than a given amount of delay usually expressed in terms of maximum acceptable average delay. In practical capacity, some amount of delay is realized.

2. Factors affecting capacity

The capacity of an airfield is not constant over time; it may vary considerably during the day or year as a result of physical and operational factors such as airfield and airspace geometry, air traffic control rules and procedures, weather, and traffic mix. When a figure is given for airfield capacity, it is usually an average based on some assumed range of conditions.In fact, it is the variability of capacity, rather than its average value, that is overall operation of an airfield.

(i) Airfield Characteristics

The physical characteristics and configuration of runways, taxiways and aprons are basic determinants of the ability to accommodate various types of aircraft and the rate at which they can be handled traffic. Also important is the type of equipment (lighting, communication, navigation aids, surveillance/radar etc) installed on the airfield. For any given configuration of runways and taxiways in use, capacity is constant. Capacity varies, however as configuration change.

(ii) Airspace Characteristics

Basically, the airspacegeometry for a given airfield does not change over time. The situation of the airfield in relation to other nearby airports and in relation to natural obstacles and features of the built environment determines the paths through the airspace that can be takento and from the airport.

(iii) Air Traffic Control

The rules and procedures of air traffic control, intended is to assure safety of flight, are basic determinants of airfield capacity. The rules governing aircraft separation, runway occupancy, spacing of arrivals and departures, and the use of different layout of runways canhave an overall effect on throughput or capacity of airfield.

(iv) Meteorological Conditions

Airport capacity is usually highest in clear weather, when visibility is at its best. Fog, lowceilings, precipitation, strong winds can cut capacity severely or close the airport altogether. For most airports, it is the combined effect of weather, runway configuration, and ATC rulesand procedures that results in the most severe loss of capacity. In fact, much of the effort to increase capacity and reduce delays at these airports may be through airfield management strategy and installation of improved technology.

(v) Demand Characteristics

The airport capacity (demand) is not depend only on service the airport provides but also aircraft's performance characteristics and the manner in which they use the airport. It is obvious that as demand approaches capacity, delays increase sharply. But for any given level of demand, the mix of aircraft with respect to speed, size, flight characteristics and pilot proficiency will also determine the rate at which they can be handled. Mismatches of speed or size between successive aircraft in the arrival stream, for example can force air traffic controllers to increase separation, thus

reducing the rate at which aircraft can be cleared over the runway threshold or off the runway.

3. Tribhuwan International Airport :

While declaring International Airport to the Tribhuwan Airport, Gauchar, the government-owned national flag carrier Nepal Airlines Corporation (then RNAC), who had the responsibility of operating domestic and international flights, had no aircrafts for operating international flights. The runway length was extended from 3750 ft. to 6600 ft. at 1966 and to 10,000 ft. (3750 meter) at 1975 only. The German Airlines Lufthansa (Boeing 707) was first landed at 1967 and Thai-airlines started its regular flight from 1968. NAC started its international flight with Boeing 727 from 1972 and with Boeing 757 from 1987. Thus international flight was started regularly from Tribhuwan International Airport Kathmandu.

After the successful people's movement for the restoration of multiparty democracy at 1990, Nepal accepted liberal economic policy and its impact also emerged in Nepalese aviation as well. As a result, private airlines entered to operate domestic flight inside country. Eight Fifth Year Plan (1991-1996) prepared after the 1990 people's movement also stated "Foreign airlines will be encouraged to operate scheduled air services to Nepal." Now the number of countries with whom Nepal has signed Air Service Agreement reached to 38 and 29 International Airlines (including Nepalese Airlines) from 14 countries operate international flights to/from Tribhuwan International Airport. 19 Domestic Airlines have valid Air Operator Certificate. There are substantial increase in domestic and international traffics and passengers in last 10 years.

In ten years, 2008 to 2017, international flights and passengers increased 133.7% and 112.4% respectably from Tribhuwan International Airport only as shown in table I below. Likewise domestic flights and passengers increased 34.4% and 101.5% respectably as shown in table II.

Table I : Increase in International Flight and Passenger movement (DEP/ARR) within 10 years(2008-2017) TIA.

Year	Flight Movement	Growth (%)	Passenger Movement	Growth (%)
2008	14276		1830630	
2017	33362		3887845	
2007-2016	Flight Growth in 10 years → 133.7 %		Passengers Growth in 10 years → 112.4 %	

Table II : Increase in Domestic Flight and Passenger movement (DEP/ARR) within 10 years(2008-2017) in TIA.

Year	Flight Movement	Growth (%)	Passenger Movement	Growth (%)
2008	69286		1036588	
2017	93097		2388583	
2008-2017	Flight Growth in 10 years → 34.4%		Passengers Growth in 10 years → 101.5%	

In 2017, including 33362 international and 93097 domestic flights, total 1,26,459 flights were operated from Tribhuwan International Airport only, which is approximately 346.5 in a day. In the same period in 2016 such figure was 276.5. These large number of flights are operated to/from Tribhuwan International Airport with only one runway, where heterogeneous types of fleets, from 16 seated Twin-otter (DHC6) to 319 seated Boeing 777 are operated. As a result, it suffered holding problem for both domestic and international flights and this is a huge problem in Nepalese aviation for efficient air transportation. Because we have to make runway clear to make take off/landing possible for these tiny aircrafts twin otters to big Boeing aircrafts, runway occupancy rises.

Surrounded by tall mountains and runway configured north-south (02-20), limitations are caused by those tall mountains for take-off and landing to Tribhuwan International Airport. Big international aircrafts approached from south and tall mountains are stand straight at the south, i.e. Phulchoki nearly 9000 ft. and Bhattedanda nearly 8000 ft. Installation of precision landing aid equipment at groundsuch as Instrument Landing System (ILS) which is very common and traditional landing aid for most of the international airports is not possible to install this airport due to these mountains. Instrument Flight Route (IFR) is only possible with the help of Navigational Aid equipment VOR/DME, but due to the lack of precision landing aid in ground, flights are diverted at low visibility and at busy traffic. Here question arises 'Can Tribhuwan International Airport resists the present traffic growth with present constraints'? Is it possible to increase Traffic Handling Capacity of this airport? Or it is already congested and no room to improve it. This is huge question around us.

TIA is urban area airport, main city is only 6 kilometers far and city area is expanding in the vicinity of airport. It is not easy to expand airport because of much expensive real state. Adding a parallel runway from existing one, spaced the required 4300 feet from existing runway, typically requires large amounts of land which it has not own. To acquire the needed land, it should enter densely populated resident area to the east or west which seems not possible.

Is there any way to increase the airport capacity without expanding the airport's infrastructure or more land acquisition? This is important question and discussion is needed if new technology can be used to increase airport capacity without increase its size.

4. Increasing Airport Capacity Without Increasing Airport Size:

(a) NextGen System:

Are there some ways to expand the runway capacity of an airport without expanding theairport's size? Exploring available of new technologies, there is possibility of expanding the functional capacity of airports.Our current air traffic system does not utilize today's available technologies fully to maximize efficiency of airspace and aircraft movements. These technologies—most of which already exist—are planned for incorporation into a completely new air traffic control system. This new approach is being called the NextGen system. NextGen is the modernization of air transportation system.It is the system that is based on Satellite navigation and control, digital non voice communication and advanced networking and sharing of decision making between the ground and the cockpit. By integrating number of innovative technologies, NextGen enhances safety, save minutes of flight time, thus save environment from unnecessary emissions. Its goal is to increase the safety, efficiency, capacity, predictability of aviation. This overhaul brings together innovative technologies, capabilities and procedures that improve flight from departure to arrival. NextGen is about a long-term transformation of our air transportation system. It focuses on leveraging new technologies, such as satellite-based navigation, surveillance and network-centric systems. In broad outline, NextGen use already developed but not fully implemented aircraft communication devices to safely reduce the physical separation of aircraft; use specialized approach and departure procedures; use these same technologies with central computer systems to manage aircraft movements on the ground. It is far cheaper forthe aviation community to implement these new technologies than to build new infrastructure. Components of Key NextGen Concepts are:

(i) Automatic Dependent Surveillance-Broadcast (ADS-B) Systems:

Perhaps the most significant of these transformational technologies is Automatic Dependent Surveillance-Broadcast or ADS-B, which uses GPS signals to provide air traffic controllers and pilots with much more accurate information on aircraft positionthat will help keep aircraft safely separated in the sky and onrunways. When properly equipped with ADS-B, both pilots and controllers will see the same real-time displays of air traffic; thereby substantially improving safety. This system provide its position, velocity, heading, altitude and identity derived from the onboard avionics of aircraft and adata-link to broadcast and receive positioning information.

The system has two basic on-board capabilities: one called ADS–B/In and the other ADS-B/Out. ADS-B/In is the ability of a plane toreceive and display signals from other aircraft, while ADS-B/Out is the ability to send signals thatother aircraft and ground systems can receive. When both are operational, a pilot will be able to seeon a cockpit display the position of all the aircraft in the vicinity and know their speed, altitude,and direction of flight. Concurrently, on the ground, air traffic control will be able to see all details of the aircraft and project where it will be as time progresses. ADS-B data updates rapidly, is very accurate and provides pilots and air traffic controllers with common surface and air situational awareness for enhanced safety, capacity and efficiency. The key minimum performance requirements for an ADS-B system to enable the use of a 3 NM or 5 NM separation minimum in the provision of air traffic control is provided in the ICAO Circular 326. ADS-B data update period is 1 second fromground station. So this technology enhances the capacity of airports. CAAN is planning to install ADS-B in four stations and it will certainly result positive effect to enhance safety, efficiency and capacity of an airport.

(ii) Required Navigational Performance (RNP)

Required Navigational Performance is a functional specification defining a level of precision an aircraft must be able to maintain on a given flight track, but without mandating thedetails of the aircraft systems (hardware and software) used to achieve this. RNP system provide more efficient use of air space and more flexibility for procedure design. Ultimate goals are the improved safety, capacity, predictability, operational efficiency, and reduced environmental impact. With a trained crew and an approved route design, an equipped plane can fly a complicated approach path very precisely by automated means. Very precise turns and altitude changes can be programmed

into the aircraft. Deviations from that path are continually monitored, and there is an automated method for abandoning the approach if a deviation beyond acceptable RNP limits is detected. Such approach techniques are currently being used at a small but growing number of airportsaround the world. The RNP procedure allows an aircraft to fly a prescribed route automatically, and if there is an engine failure the aircraft immediately follows a path that clears the terrain at its lowest point. Since the aircraft is assured of being able to clear the lowest point, its climb rate does not have to be as great, so it can take off at a higher gross weight. Widespread use of RNP departures at airports will assign departing aircraft to a small number ofprecise dispersal routings. These routes can be designed to clearly separate departing and arriving aircraft. This will permit a higher rate of departures, since a following aircraft can avoid the previous aircraft's wake turbulence and can also be routed on a precisely created path that does notconflict with an arriving aircraft's equally precise path.

CAAN has developed the procedure for Required Navigation Performance-Authorization Required (RNP-AR) approach into Kathamandu's Tribhuvan International Airport with the assistance of French Procedure Designer Quovadis which is Airbus owned company and Qatar airlines also involved actively.

As mentioned above Kathmandu has one of the world's most complicated approaches due to the surrounding challenging terrain. Flying an RNP AR approach into Tribhuvan airport reduces pilots' workload considerably and allows them to take full benefit of the advanced navigation equipment installed in aircraft to easily circumnavigate difficult terrain. With a smooth descent and fully stabilized approach, it allows significant safety improvements and reduces the required visibility compared with current standard flying procedures.The RNP AR procedure allows an aircraft to automatically fly accurate trajectories without relying on ground-based navigation aids, optimizes airspace utilization and reduces diversions in difficult weather conditions. Qatar Airways has become the first airline in the world to fly an aircraft with a new navigational approach into the Nepalese capital Kathmandu, which has a highly complicated terrain surrounded by the Himalayan mountains.The airline implemented a Required Navigation Performance-Authorization Required (RNP-AR) approach into Kathamandu's Tribhuvan International Airport Runway 02.CAAN intends to implement the RNP APCH at Gautam Buddha and Dhangadi airport. If all International Airlines approaching to Kathmandu airport implemented RNP approaches, safety, efficiency and capacity of TIA may increase.

(iii) Wide Area Augmentation System (WAAS)

WAAS is a supplemental system for common aircraft GPS systems that provides a signal thatincreases the accuracy of the GPS equipment. It requires an onboard device that receives a signalfrom a network of ground stations placed around the country. WAAS allows reasonably preciseapproach paths to be created to the airports that do not have instrument landing systems (ILSs) or other navigational aids to assist with poor-weather approaches. Aircraft capable of RNP using a full array of satellites do not need WAAS to fly approaches independent of ground-based navigation devices. WAASallows lesser-equipped aircraft to operate with similar capabilities to RNP-equipped aircraft.

(iv) Data Communication

Current communications between aircrew and air traffic control are through voice communications. Initially, the introduction of data communications will provide an additional means of two-way communication for delivery of air traffic control clearances, instructions, advisories, flight crew requests and reports. With the majority of aircraft data link equipped, the exchange of routine controller-pilot messages and clearances via data link will enable controllers to handle more traffic. This will improve air traffic controller productivity, enhancing capacity and safety.

(v) Network Enabled Weather (NEW)

Mostly aircrafts delays are attributed to weather every year. The goal of NEW is to cut weather-related delays at least in half. Tens of thousands of global weather observation and sensor reports from ground, airborne and space based sources will fuse into a single national weather information system, updated in real time. NEW will provide a common weather picture across the national airspace system and enable better air transportation decision making.

(vi) System Wide Information Management (SWIM)

System Wide Information Management will provide a single infrastructure and information management system to deliver data to many users and application. By reducing the number and types of interfaces and systems, SWIM will reduce data redundancy and better facilitate multi-user information sharing. SWIM will reduce data redundancy and better facilitate multi-user information sharing. SWIM will also enable new modes of decision making as information is more easily accessed.

(b) Installation of Instrument Landing System (ILS)

The ILS system for precision guidance system for aircraft landing is one that is most widely known among all navigation systems. It is used at most of the airports around the world in all weather conditions. The main reason for the expansion of ILS is its exceptional operational reliability and low need of airborne equipments. ILS is highly durable during atmospheric disturbances.

ILS is ground based radio navigation system giving pilot lateral and vertical guidance to approach the runway. The system uses combination of two independent subsystems, Localizer and Glide Slope. Localizer antenna situated at the end of the runway and transmit radio beam indicating the runway centerline. Glide slope antenna situated in the edge of the runway and its beam indicates the correct vertical descent profile. According to ICAO, standard angle of approach slope is 3° which is the adequate vertical descent angle for landing. The intersection of the approach slope to the runway centre line giving by transmitter is ideal descent path. The landing airplane follow the fixed trajectory with the angle of 3° down to the runway. During the final phase of the flight, pilot watch the localizer beam and approach to runway centerline for safe landing.

The terrain (Bhattedanda and its vicinity) at between 8 and 10 NM that controls the descent on the straight-in runway aligned approach is the main problem for not possible to install glide slope equipment transmission to provide 3° . Civil Aviation Authority of Nepal (CAAN) is therefore planning to install Localizer only with the technical assistance of JICA (Japan International Co-operation Agency) for lateral guidance. But small aircraft may take advantage of glide slope of 3° rather than big aircrafts. This reduces the diversion at low visibility weather.

(c) Enroute Weather equipments installation

Weather equipments to provide terminal weather information are only installed in Tribhuwan International Airport. But there is no equipments to provide enroute weather information. When any meteorological condition which is hazardous to flight is encountered in en-route by pilot, the flight may be in risk. To avoid this situation Weather Radar equipment can be installed to inform en-route meteorological condition. This type of equipments can inform the weather condition of minimum 50 nm around the equipment. These equipments can be installed in busy flight route.

(d) Rapid Exit Taxiway (or High Speed Exits)

The Rapid Exit Taxiway (or high speed exits) enable a landing aircraft to vacate the runway more quickly without having to slow down to 'normal' taxi speeds. It enable aircraft to leave the runway at speeds up to 50 to 60 knots depending on the runway or aircraft type. A large aircraft may need to slow to 10 or 15 knots to take a right angle turn, this would mean spending longer on the runway down to that speed.

Since the next aircraft on the approach cannot land until the runway is clear, this enables closer spacing of landing aircraft. Aircraft type, restricting, operator standard procedure, airport and weather can all impact what 'high speed' means but it is always faster than the 90 degrees turn.

(e) Runway Centerline Lighting Systems (RCLS)

Runway Centerline Lights together with markings are the primary visual cues used by pilots for visual and direction guidance during landing, roll out and take off. These lights allow pilots to estimate the distance from the end of runway through the color of lights. The installation of runway centerline lights will enhance safety for an aircraft landing or taking off in adverse weather condition or during nights. The aerodrome operator should consider installing runway centerline lights when planning major construction works or resurfacing the runway. Now CAAN is planning to resurface the runway and this is the right time for installation of centerline lights.

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3. ICAO Doc 9184
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Birendra Kumar Singh
Former Joint Secretary, MoCTCA

Handling the Disaster Management Now or Never through coordinated efforts

Depending upon the size, population and economy of a nation, all airports have been said to be a city within a city and our great Trojan Horse i.e. TIA is of no exception. Especially with the ever swelling and spilling over of the passengers and the overcrowding of the aircrafts, both on land and sky, we not only need to rethink but imagine a greater degree of innovative ideas for preparing to handle if any disaster does occur (hope not and pray not). But as the saying goes: "Man purposes, God disposes", hence time has approached and lessons learnt. TIA should launch forward in putting all hands on deck to ensure that if any disaster does occur, we are fully prepared to handle any crisis that may befall in the country which will have a great impact to TIA both physically, mentally, and above all have to combat the disaster of crisis at all cost. So, instead of burning the midnight oil we should plan and work out meticulously in way advance and not preparing when the accident does happen.

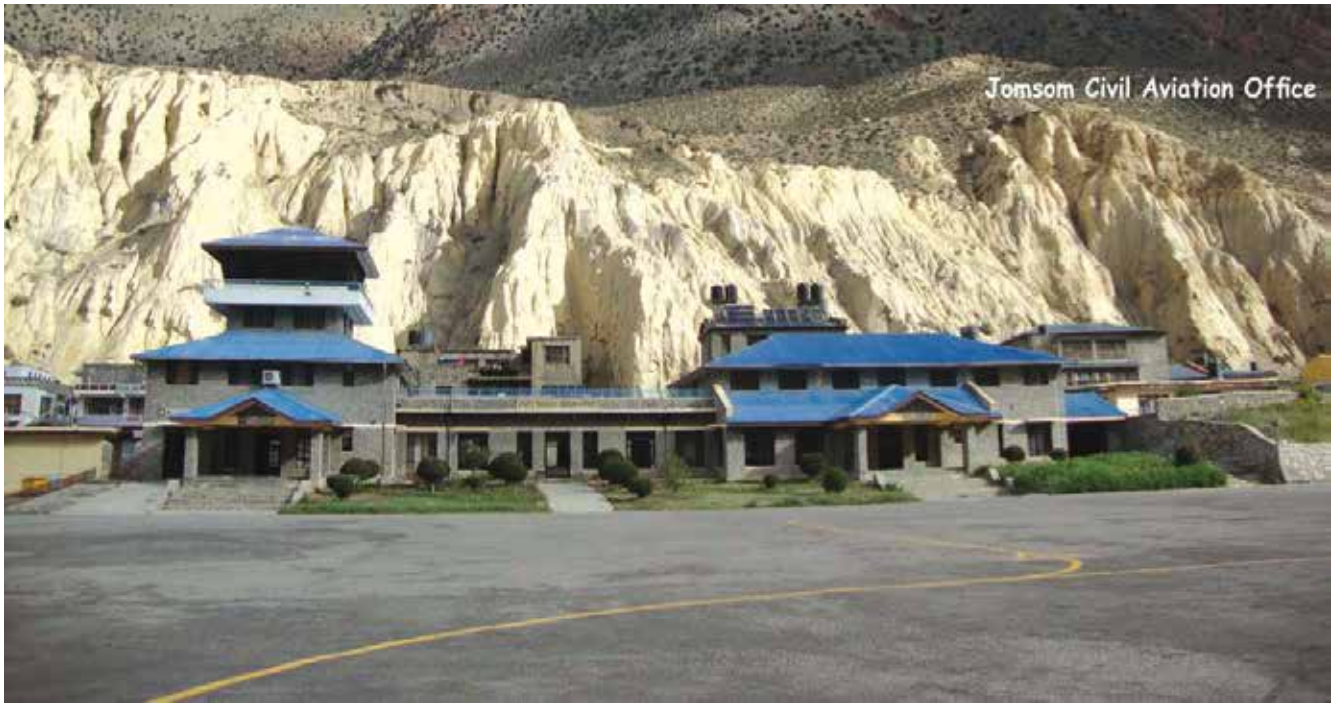
In order to be effective in handling the disaster situation we should be able to coordinate, communicate, and ensure that we prepare ourselves in advance and to know as to where and what place we should use TIA as. Let me site an example as to how we had managed during a national crisis when the Malkoo Bridge got blown away. No sooner did we hear the news about this fatal incident, a meeting was called at TIA with all the stakeholders of TIA to combat this fatal crisis and as to what we should do if TIA gets involved to any extent, in presence of the GM of TIA. After the meeting and while we were getting prepared, the very next day we had a delegation from the US Embassy to host a meeting and to discuss as to how TIA could handle the big aircrafts that would be landing at TIA for the first time. They informed us that these aircrafts would be carrying the belly bridges for the different parts of the country where these bridges need to be stalled. As during those days we only had only 7 international aprons and few domestic aprons it needed meticulous planning as to how the huge planes that landed needed to be guided to a certain place and reload the brides and these bridges needed to be whisked away immediately so at all times TIA had space for the other incoming aircrafts. Once these huge aircrafts landed I would wait in my Follow Me vehicle to guide them to a proper designated spot get it unloaded because most of these aircrafts (C5 Galaxy, Antonov, and other cargo aircrafts) were making their first touchdown at TIA and would be in a dilemma if they were not guided to their proper positions. Hence we had to be on our toes and ready at beck and call be fully prepared for the aircraft to move them to the assigned places (there were other technical staff from these aircrafts to assist us in parking and de loading the cargo). Most of these aircrafts were told to return to their other destination due to the scarcity of the space of TIA which they duly complied.

I have described these incidents to manifest that we did through planning, cooperation communication and took all the necessary help of all concerned and we did all the work including security, parking of the aircrafts, de-loading, etc. in a very planned way. All the concerned trucks to carry the belly bridges were at a standby position so once the aircraft landed they were at the apron to load the cargo. This way there was no delay in the delivery of the goods. Of course all security along with the necessary formalities was completed. To ensure that the trucks came on time to carry the cargo we had to call several times to the concerned office so the trucks arrived at TIA on the dot. For this, some of the friends' job at TIA was to ring the concerned departments several times so they sent the trucks at TIA on time. All were assigned with specific tasks and it was their responsibility to get the job done. So as my job was to park the landed aircraft at a specific spot I ensured that the spot was ready and to supervise the unloading of the cargo swiftly so the other big aircraft would be fitted in the assigned space. The staff whose job was to get the truck on time had to ensure that the concerned agency got the word and the truck should arrive on time at any cost.

My idea to relate these small incidents is to show that disasters can be overcome but it needs organization, communication and above all meticulous planning and preparations which can be done. Natural disasters of any nature never come announced as: flooding,

avalanches, earthquakes, etc. never come shouting at the top of their voices but once the come they bring in huge disaster, sadness and loss of life accompanied by sorrow and huge economic loss. So my saying is that we need to be prepared at all times. We need to be on our at all times which we can do it. Here are some of the suggestions that I would to share and this could be a first hand preparation for the future disaster that may occur and TIA above all needs to be all prepared:

- **An Isolated Area:** This I have been always informing the concerned authorities when I was deployed as terminal duty officer that an isolated area is necessary. When we get those anonymous bomb threats and we need to isolate the threatened aircraft for the bomb checkup; which was lacking when I experienced a bomb threat in the RNAC Twin Otter flight outbound for Surkhet from Kathmandu via Surkhet. So we had to pull the aircraft at the old fire station of TIA. Luckily all went well. But as I have been informed that a provision has been made if good if not it is now we do have an isolated area for these undesired actions
- **No dumping spots at TIA:** We should ensure that once the goods arrive at TIA it immediately gets whisked off from the airport. For this we should ensure that all the concerned agencies get the information that their goods have arrived and it needs to be removed from the airport. In order to expedite the removal of the goods we should assign someone at TDO to keep calling the concerned authority till someone arrives and takes away the goods. Considering the bureaucracy it may be difficult but this is must to do our job. We must make sure that the concerned authorities know the gravity of the space at TIA. Again we should coordinate with all the concerned authorities beforehand and tell them of their duties be it customs, immigration, security etc., but for this the top notches of TIA should be moving at all times. So in the future TIA will be devoid of criticism as it faced during the earthquake. So I appeal to all that all the concerned stakeholders' sit together and plan for the management of any disaster that may occur in the future. For this planning plays a pivotal role and will produce great results. All should join hands in making disaster management a success. Good luck in your future endeavor TIA. A tiny step in planning will create a gigantic success in action.



Sudhir Kumar Chaudhary
Director, CAAN

ICAO Roadmap Transition Steps From AIS To AIM Explained

Background

The 11th Air Navigation Conference held at Montréal in September 2003 recognized that aeronautical information service (AIS) would become one of the most valuable and important enabling services in the global air traffic management (ATM) system environment envisioned by the operational concept. As the global ATM system foreseen in the operational concept was based on a collaborative decision-making environment, the timely availability of high-quality and reliable electronic aeronautical, meteorological, airspace and flow management information would be necessary.

The 12th Air Navigation Conference held at Montreal in November 2012 has made Recommendation 1/11 -Automation roadmap that ICAO (a) develop a global roadmap for the evolution of ground ATM automation systems in line with aviation system block upgrade (ASBU) implementation; and (b) develop performance-based system requirements for air traffic management automation systems so that (1) where necessary these systems are interoperable across States and regions; and (2) the function and operation of these systems will result in consistent and predictable air traffic management system performance across States and regions.

To guide the implementation of CNS/ATM systems the Global Air Navigation Plan (GANP) was developed with respect to the Global ATM Operational Concept. The GANP sets out 23 global plan initiatives (GPI) out of which two GPI are directly related to aeronautical information (GPI-18 – Aeronautical Information and GPI-20 – WGS-84) and many of the others have an indirect impact on the way aeronautical information will be exchanged in the future.

Objective of the Transition to AIM

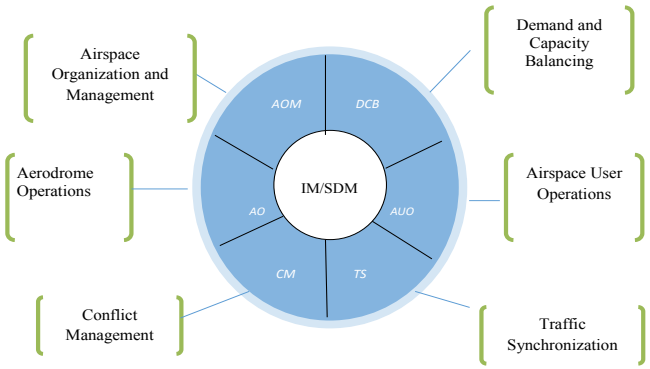
Recommendation 1/8 of 11th Air Navigation Conference clearly stated the objective for global aeronautical information as that ICAO, when developing ATM requirements; define corresponding requirements for safe and efficient global aeronautical information management that would support a digital, real-time, accredited and secure aeronautical information environment.

To satisfy new requirements arising from the Global ATM Operational Concept, aeronautical information services must transition to a broader concept of aeronautical information management, with a different method of information provision and management given its data-centric nature as opposed to the product-centric nature of AIS.

What Will Change

The Global ATM Operational Concept defines seven interdependent concept components that will be integrated to form the future ATM system. They comprise airspace organization and management (AOM), aerodrome operations (AO), demand and capacity balancing (DCB), traffic synchronization (TS), conflict management (CM), airspace user operations (AUO) and ATM service delivery management (SDM).

The management, utilization and transmission of data and information are vital to the proper functioning of these components. The exchange and management of information used by the different processes and services must ensure the cohesion and linkage between these seven concept components. Figure below illustrates how information management is at the core of air navigation services.

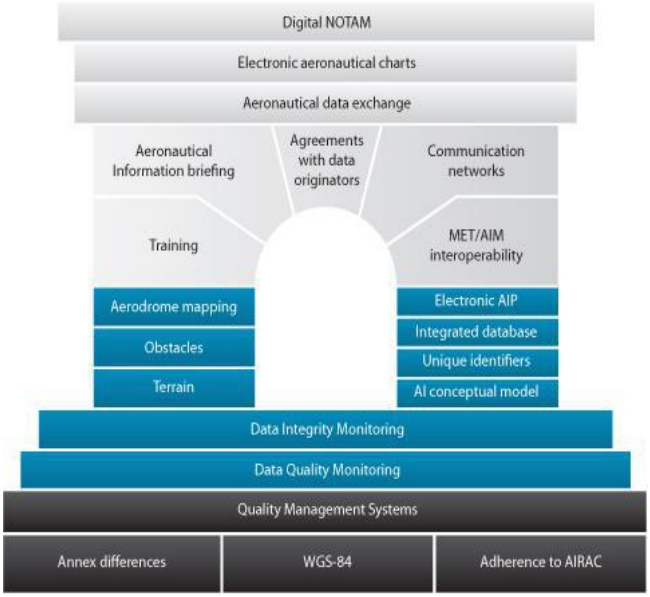


IM/SDM = Information management / ATM service delivery management

Figure 1. Information Management as a component of the future ATM Operational Concept

Three Phases of the Roadmap and Its 21 Steps

The phases of the roadmap are not required to be implemented in sequence as some of these elements needs to be implemented in line with others.



Phase 1 – Black in color, Phase 2 – Blue in color and Phase 3 – Grey in color

Figure 2. Positioning of the 21 steps of the roadmap in the three phases

Transition Steps Explained

Each of the 21 positioning steps from the ICAO AIS to AIM Roadmap is furthermore described below:

P-01 — Data Quality Monitoring

An on-going challenge for organizations producing information is to ensure that the quality of the information suits its intended uses and that data users are provided with the appropriate information about data quality.

Description:

Data quality monitoring is the monitoring of data to ensure it meets the ICAO Annex publication resolution and integrity requirements. A quality management system should be implemented to define all activities relating to processing and publication of aeronautical information in procedures and processes. Aeronautical data has 2 components, a static component (information that does not change often, for example AIPs, charts, etc.) and a dynamic component (information that changes often, for example NOTAM). The quality of data contained in these components can be measured by the implementation of SLA's (Service Level Agreements) between data originators and AIS providers. This can only be enforced by the states regulating authority if adequate national regulations are implemented to ensure accountability for the quality and integrity of aeronautical data.

P-02 — Data Integrity Monitoring

Data integrity requirements introduced by safety objectives must be measurable and adequate.

Description:

Data integrity monitoring is the monitoring of the data from originator, through the data process chain, to eventual publication. Data integrity monitoring can be facilitated by the implementation of processes like CHAIN (Controlled and Harmonized Aeronautical Information Network). CHAIN is used to improve the accuracy and quality of the originated aeronautical data and its management from the point of origination to the point of publication and to subsequently enable enhanced processing throughout the entire aeronautical data chain.

P-03 — AIRAC Adherence Monitoring

The standard regulation and control mechanisms for the distribution of aeronautical information is an essential element ensuring that each person involved makes decisions based on the same information.

Description:

As defined in Annex 15, AIRAC defines a series of common dates and an associated standard aeronautical information publication procedure for States. This is to allow for the updating of information in electronic systems like Flight Management Systems (FMS) and Air Traffic Control (ATC) Systems. It is essential, for both efficiency and safety, that Pilots, Air Traffic Controllers, Flight Management Systems and Aviation Charts all have the same data set. The implementation of national regulations and monitoring mechanisms such as auditing in terms of AIRAC adherence would ensure compliance.

P-04 — Monitoring of States' differences to Annex 4 and Annex 15

Adherence to Standards is an ongoing effort. The transition to AIM offers an opportunity to increase the focus on implementation and on reviewing differences in the application of the Standards by States.

Description:

Differences to ICAO SARP's need to be clearly defined in the AIP of the state under GEN 1.7 as defined in ICAO Doc 8126, chapter 5, section 5.8.

P-05 — WGS-84 Implementation

The target of expressing 100 percent of coordinates in the WGS-84 reference system is achievable. This is one of the first steps to achieve in the transition to AIM.

Description:

WGS-84 standard with respect to international civil aviation must be defined in each states national regulation to ensure compliance. Survey requirements for the year survey (full or maintenance survey) needs to form part of the national regulations which would assist not only with data quality but with the implementation of electronic terrain and obstacle data (e-TOD) as well. Therefore the expression of all coordinates in the AIP and charts using WGS-84 is important and should be enforced by the implementation of national regulations.

P-06 — Integrated Aeronautical Information Database

The establishment and maintenance of a database where digital aeronautical data from a State are integrated and used to produce current and future AIM products and services is the main step in the transition to AIM.

Description:

An Integrated Aeronautical database is a single, centralized repository of aeronautical information where digital aeronautical data from a State are integrated and used to produce current and future AIM products and services. This database must be able to exchange information based on the Aeronautical Information Exchange Model (AIXM) with other aeronautical databases.

P-07 — Unique Identifiers

Improvements to the existing mechanisms for the unique identification of aeronautical features are required to increase the effectiveness of information exchange without the need for human intervention.

Description:

Data, received by AIS, should receive a unique identifier when the data is processed and stored in the AIS database. Data should already receive a unique identifier when the aeronautical data is entered in the data chain by the original data provider, e.g. surveyor, PANS-OPS designer, etc. That unique identifier shall then be carried through all subsequent processes.

P-08 — Aeronautical Information Conceptual Model

Defining the semantics of the aeronautical information to be managed in terms of digital data structures is essential for introducing interoperability. The existing documentation developed by States and international organizations and considered mature enough for global applicability will be used to produce common guidance material.

Description:

The Aeronautical Information Conceptual Model, also known as “AICM”, provides a formal description of the aeronautical information items, using a standard data modeling language. This standard data model enables the automated processing of aeronautical information by the end users. Automated processing of data limits the occurrence of human induced errors. AICM forms the basis of the Aeronautical Information Exchange Model (AIXM).

P-09 — Aeronautical Data Exchange

Defining the syntax of the aeronautical data to be exchanged in terms of field names and types is essential for introducing interoperability. The exchange of data and the mechanisms to exchange or access the new digital products or services will be defined by an exchange model.

Description:

The Aeronautical Information Exchange Model (AIXM) is a specification designed to enable the encoding and the distribution in digital format of the aeronautical information, which has to be supplied by the national AIS providers in accordance with the ICAO Convention. A standard for an aeronautical data exchange model will ensure standardized interfaces between the computers of both providers and users of data.

P-10 — Communication Networks

More data will be exchanged on ground networks and the current data will be exchanged in a form that will require more bandwidth. It is envisaged that a transition of the network to one based on Internet protocol (IP) will be required to cope with these future needs. For the transition to AIM to be effective, the needs of future AIM will have to be declared in terms useable for network specification.

Description:

Networks utilizing Internet protocol for the transmission and dissemination of aeronautical data and information should be implemented. This would also ensure the safety and security of information through the establishment of network security mechanisms and firewalls.

P-11 — Electronic AIP (e-AIP)

The integrated aeronautical information package will not be phased out. On the contrary, it will be adapted to include the new data products needed during the

transition to AIM. The electronic version of the AIP will be defined in two forms: a printable document and one that can be viewed through web browsers. Guidance material will be required to help States implementing the web browser form of the electronic AIP in order to avoid the proliferation of different presentations of AIP information over the Internet.

Description:

The Electronic AIP (e-AIP) is a HTML version of the AIP which consists of a set of XML files. (It is not a PDF version of the AIP. The applications used to create the e-AIP must be able to create it in accordance with the e-AIP specification.

P-12 — Aeronautical Information Briefing

Fine tuning of the current NOTAM format by introduction of new selection criteria is needed to improve the selectivity of the information presented to pilots in the pre-flight information bulletin. (This can be done in Phase 1.) The combination of graphical and textual information in a digital net-centric environment will be used to better respond to the airspace users requirements for aeronautical information in all phases of flight when the new digital data products are specified and made available (in Phase 3).

Description:

This entails digitalizing the traditional paper based pre-flight NOTAM briefing and expanding it to include other aeronautical information/ data elements such as charts and other graphical products as well as metrological data and charts. This also includes using systems that have the capability to filter data to meet specific client product requirements.

P-13 — Terrain

The compilation and provision of terrain data sets is an integral part of the transition to AIM.

Description:

States must establish a national digital elevation model (DTM) or digital surface model (DSM) which meets the ICAO Annex 15 requirements for terrain data. The establishment of national regulations would ensure compliance to the terrain data specifications in terms of accuracy, quality and resolution.

P-14 — Obstacles

The compilation and provision of obstacle data sets is an integral part of the transition to AIM.

Description:

States must establish national regulations for the controlling and monitoring of obstacles in the vicinity of an aerodrome. These regulations should also indicate the four areas (Areas 1, 2, 3 and 4) as specified in Annex 15, chapter 10 and clearly define the process of approval of the obstacle through the Civil Aviation Authority of Nepal.

P-15 — Aerodrome Mapping

There is a new requirement emerging from industry for traditional aerodrome charts to be complemented by structured aerodrome mapping data that can be imported into electronic displays.

Description:

An Aerodrome Mapping Database is a Geographic Information System (GIS) database of an airport describing:

- the spatial layout of an airport;
- the geometry of features (e.g. runways, taxiways, buildings) described as points, lines and polygons;
- further information characterizing the features and their functions which are stored as attributes (e.g. surface type, name/object identifier, runway slope).

As all the information should already be available in AIXM, the GIS system employed by the state should be able to display this information visually.

P-16 — Training

The training of personnel will be adapted to the new requirements on skill and competencies introduced by the transition to AIM. A new training manual is developed to reflect the new competencies required.

Description:

Training requirements for AIS staff must be expanded to include the new requirements of databases, AIXM, XML, HTML, etc.

P-17 — Quality

Quality management measures will be re-enforced to ensure the required level of quality of the aeronautical information. In order to assist States in the implementation of an efficient quality management system, guidance material for the development of a quality manual will be developed.

Description:

States must implement national regulation on the requirement for all organization involved in aeronautical data processing and publication, to have a Quality Management System in place, which shall manage the safety of all their services.

P-18 — Agreements with Data Originators

Data of high quality can only be maintained if the source material is of good quality. States will be required to better control relationships along the whole data chain from the producer to the distributor. This may take

the form of template service level agreements (SLA) with data originators, neighboring States, information service providers or others.

Description:

Agreements with data originators are usually made up in the form of Service level agreements (SLA's). The SLA package is a series of interrelated elements to facilitate the establishment of agreements between aeronautical data originators and Aeronautical Information Services (AIS). The SLA requirement must also be included into the national regulations to ensure compliance.

P-19 — Interoperability with Meteorological Products

The meteorological data products of the future will be combined with the AIM data products to form the future flight briefings and the new services provided to all ATM components. Now that the bandwidth of telecommunication links and space for digital storage devices are no longer limiting factors, the move towards net-centric and system-wide information management (SWIM) is becoming feasible for the wider distribution of meteorological forecast data from the world area forecast centers in a format that will not require considerable effort for the learning and configuration of decoding software, thereby ensuring true interoperability. Meteorological information is essential in the compilation of pilot briefings. The transition to AIM will include activities at both the standardization and the implementation level to find solutions for the interoperability of meteorological data products with the new AIM data products.

Description:

The established and implementation of an exchange model would ensure that data in products like METAR/SPECI/TAF/SIGMET is exchanged in digital form in accordance with a globally interoperable information exchange model which will use extensible mark-up language (XML) and geography mark-up language (GML).

P-20 — Electronic Aeronautical Charts

New electronic aeronautical charts, based on digital databases and the use of geographic information systems, will be defined to complement some paper charts and to replace others that have become obsolete and need to be improved to satisfy user needs. The possibility of deploying these new products over the Internet will be explored.

Description:

A dataset of GML and XML aeronautical, terrain and obstacle data that can be interpreted by systems to produce a graphical representation of the applicable data.

P-21 — Digital NOTAM

One of the most innovative data products that will be based on the Standard for an aeronautical data exchange model will be a digital NOTAM that will provide dynamic aeronautical information to all stakeholders with an accurate and up-to-date common representation of the aeronautical environment in which flights are operated.

Description:

A dataset of AIXM / XML encoded NOTAM that can be exchanged through multiple media and with multiple systems for the updating (temporarily or permanent) of "published"/stored data.

Recommendations for the transition from AIS to AIM: CAAN's Perspective

1. Develop the AIS/AIM policies, i.e. strategies, guidlines for the transition from AIS to AIM taking into consideration all involved parties;
2. Designate data originators and determine quality requirement and make service level agreements (SLA) with data originators;
3. Establish Quality Management System.
4. AIM staff should be properly trained to perform the tasks within the AIM Department according to the standards and regulations. The training and education curriculum should be defined. Personnel should be given prior awareness of the roles and responsibilities before being transferred from other business units to the AIM Department.
5. Elaborate and execute awareness workshops for CAAN management and staff to increase the awareness of AIM within CAAN and to other data originators.
6. Establish and maintain an Integrated Aeronautical Information database.

References:

ICAO Doc 9750 - Global Air Navigation Plan

ICAO Roadmap for the Transition from AIS to AIM

ICAO Doc 9854-Global Air Traffic Management Operational Concept

Draft Conceptual Framework Report on Preparation of Design and Specification Work for AIS Automation in AIM Department, CAAN.

सामाजिक सुरक्षाको हक

विनोद प्रसाद न्यौपाने
निर्देशक, ने.ना.उ.प्रा.

नेपालको संविधान २०७२ को धारा ३४ को उपधारा २ मा प्रत्येक श्रमिकलाई उचित पारिश्रमिक सुविधा तथा योगदानमा आधारित सामाजिक सुरक्षाको हक हुनेछ भन्ने व्यवस्था छ। मानव अधिकारको विश्वव्यापी घोषणाको धारा २२ मा प्रत्येक व्यक्तिलाई समाजको एक सदस्यको रुपमा सामाजिक सुरक्षाको नैसर्गिक हक हुनेछ र राष्ट्रिय अन्तर्राष्ट्रिय प्रयासद्वारा व्यक्तिको आर्थिक, सामाजिक र सांस्कृतिक अधिकारलाई उसको आत्म स्वाभिमान तथा व्यक्तित्व विकासको अभिन्न अंगको रुपमा स्वीकार गरिनेछ भन्ने उल्लेख भएको छ। यसरी नेपालको संविधानमा नागरिकको मौलिक हक र मानव अधिकारको विश्वव्यापी घोषणा पत्रमा मानवको नैसर्गिक हकको रुपमा परिभाषित सामाजिक सुरक्षाको हक भनेको के हो त आखिर ?

सामाजिक सुरक्षाको अवधारणा

पूर्वीय सभ्यतामा सर्वजन हिताय सर्वजन सुखाय वैदिक कालदेखि नै धार्मिक मान्यताको प्रमुख प्रेरणाको रुपमा रहेको पाइन्छ। परोपकाराय च पुण्याय, पापाय परपीडनमः भन्ने उक्तिमा लुकेको सामाजिक कार्यमा उदार हृदय हुनुपर्ने र शोषण उत्पीडन गर्न नहुने सन्देश कसैबाट छिपेको छैन। हिन्दु धर्म ग्रन्थहरुमा विभिन्न महापुरुषहरुले गरेका समाज सुधारका कार्यहरुलाई स्वर्णिम अक्षरमा लेखिएको छ। राम राज्यको परिकल्पना, सम्राट अशोकको धर्म अभियान, चाणक्यको अर्थशास्त्रीय मान्यता सामाजिक सुरक्षाका उत्तम स्वरुप हुन। यी बाटै प्रेरणा लिएर मध्ययुगीन राजा महाराजाहरुले समेत सामाज सुधारका अनेक कार्यहरु गरेको उदाहरण इतिहासमा वर्णित भएको पाइन्छ। ठाँउ ठाँउमा पाटीपौवा बनाउने, बृद्धबृद्धाको लागि मठ मन्दिरमा आश्रयको व्यवस्था गर्ने, धर्म भकारीको चलन चलाउने, सबै प्रजाको चुल्होमा आगो बलेपछि मात्र आफूले खाने राजकर्मका वयान हामीले सुनेकै छौ। बौद्ध धर्ममा सत्कर्म सद्विचार मार्फत समाजमा समानता ल्याउने बाटो देखाइएको छ। बुद्ध वचनमा दानलाइ सत्कर्म र सद्विचारको बीजांकुरण मानिएको छ।

पश्चिमी सभ्यतामा इशाइ तथा इस्लाम धर्मकै मूल मान्यतामा दान (Charity) लाई महत्व दिएको पाइन्छ। दान र धर्म एक अर्कासंग अकाट्य रुपमा रहेबाट समाजका धनीमानीहरुले आफ्नो आर्जनबाट केही हिस्सा सामाजिक कार्यको लागि छुट्याउने गरेको इतिहास विगतदेखि वर्तमानसम्म देखिन्छ। विभिन्न च्यारिटी संगठनहरु खोल्ने र तिनका माध्यमबाट विश्वभर शिक्षा, स्वास्थ्य, जनचेतना अभिवृद्धि गर्ने क्षेत्रमा निरन्तर कार्य गरिदै आएको भेटिन्छ। रोग, भोक र युद्धग्रस्थ क्षेत्रहरुमा पुगेर लाखौं, करोडौं मानिसहरुलाई मद्दत गर्ने; उनीहरुको जिवन बचाउने अभियान सामाजिक सुरक्षाको महत्वपूर्ण पाटो हो।

सामाजिक सुरक्षाको उच्चतम अभ्यास गरिरहेका युरोपियन देशहरुको Social Safety Net को विकासक्रम खोज्दै जाँदा जर्मन साम्राज्यको उदय सम्म पुगिन्छ। जर्मनीका प्रथम चान्सलर Otto Von Bismarck (1871-90) ले करीव १४० वर्ष अघि जर्मन राष्ट्रवादको जग राख्ने क्रममा शुरु गरेको वृद्ध उमेरका नागरिकलाई पेन्सन दिने, दुर्घटनाको क्षतिपूर्ति वापत बीमा गर्ने र राष्ट्रसेवक सैनिक कर्मचारीको स्वास्थ्य बीमा गर्ने कार्यक्रम कै विकसित स्वरुप आजको युरोपको सामाजिक सुरक्षा कार्यक्रम हो। यूरोपमा पेरिस कम्यून (१८७१) बाट बढेको श्रमिक वर्गको चेतनास्तरको कारण जर्मन साम्राज्य विस्तारमा अप्ठेरो पर्ने ठानी कामदार वर्गको समर्थन हासिल गर्न Bismarck ले अवलम्बन गरेको सामाजिक नीति नै कालान्तरमा युरोपेली महासंघको मार्गदर्शन बन्न पुग्यो। जसमा आजको समयसम्म आईपुग्दा देहायका कार्यक्रमहरु थपिएर कार्यान्वयनमा आएका छन;

- निःशुल्क शिक्षा
- निःशुल्क स्वास्थ्य सुविधा/औषधोपचार बीमा
- पेन्सन सुविधा
- सुपथ मुल्यका घर (Housing)
- निःशुल्क/सस्तो मुल्यका सार्वजनिक सवारी
- सुपथ मुल्यका पसल र राशन कार्डको व्यवस्था
- कृषि, पशुपन्छि र औद्योगिक बीमामा सहुलियत
- निःशुल्क कानूनी सहायता
- बेरोजगार भत्ता
- उपभोक्ता हित संरक्षण आदि।

औद्योगिक क्रान्ति पछि विश्वभरी नै मालिक र मजदुर वर्गका बीच आम्दानी र जीवनस्तरको अन्तर वढ्दै गएर सामाजिक सुरक्षाको विषय दान धर्मको सीमाबाट छुट्टिएर राज्यको अनिवार्य दायित्व बन्न पुगेको छ। मालिक र मजदुर वर्गको बीचमा आयको असमानता (Income Disparity) जति जति चुलिदै गयो, उति उति सरकारले सामाजिक सुरक्षाका नवीन उपायहरु अवलम्बन गर्दै आएको छ। यसले लोक कल्याणकारी राज्य (Welfare State) को अवधारणा सर्वव्यापी बन्दै गएको छ।

के हो त लोक कल्याणकारी राज्य ?

समाजमा हुने खाने र हुँदा खाने (Haves and Haves not) बीचको अन्तर चुलिदै जाँदा गरीबी, बेरोजगारी, असमानता बढ्दै जाँदा, सामाजिक विभेद, अन्याय, उत्पीडन संस्थागत बन्दै जाँदा धर्ती बस्न लायक ठाँउ रहेन। समाज राम राज्य भएन। द्धन्द बढ्दै गयो। हत्या, हिंशा, लुटपाट, अशान्ति सामाजिक विकारको रुपमा विकसित

हुदै गए । गरीबी र असमानताको विकारको रुपमा सामाजिक अस्थिरता बढेपछि लोक कल्याणकारी राज्यका औजारहरु (Tools of Welfare State) लाई त्यसको रोकथामका लागि प्रयोग गर्न थालिएको छ । सन् १९९० को दशक देखि विकसित भएको नया विश्व अर्थव्यवस्था (New Economic Order) को अभिन्न अङ्गको रुपमा लोक कल्याणकारी राज्यको अवधारणाले विश्वका सबै राज्यहरुमा अत्याधिक महत्व पाएको छ ।

विश्वव्यापी प्रचलनमा रहेका लोक कल्याणकारी सामाजिक सुरक्षा कार्यक्रमहरुमा;

- वृद्ध अवस्थामा दिइने भत्ता/पेन्सन,
- अशक्त, अपाङ्ग, सहारा विहीनहरुको लागि सुरक्षा भत्ता,
- बेरोजगारहरुको लागि भत्ता,
- बच्चा बच्चीहरुको लागि पालन पोषण भत्ता,
- स्वास्थ्य उपचार तथा मातृत्व सुरक्षा भत्ता,
- दुर्घटना तथा अशक्तता अवधिको भत्ता,
- रोजगारी स्थलमा हुने दुर्घटना र मृत्यु पश्चात दिइने सुविधा,
- आश्रित परिवारको सुरक्षा कार्यक्रम,
- पिछडिएका जातजाति संरक्षण कार्यक्रम,
- दुर्गम क्षेत्रका बासिन्दा सहायता कार्यक्रम,
- सहुलियत कार्ड/रासन कार्ड, सुपथ मुल्य पसल,
- स्वास्थ्य बीमा कार्यक्रम आदि रहेका छन ।

लोक कल्याणकारी सामाजिक सुरक्षा कार्यक्रमहरुले सरकारले दिने नगद सुविधा मात्र होइन; कामको सुरक्षा, स्वास्थ्य उपचार र सामाजिक विकासका वहुआयामिक पक्षहरुलाई समेटेको हुन्छ । लोक कल्याणकारी राज्यको आवरण भित्र राज्यका सबै नागरिकको गाँस, बास र कपासको सुनिश्चितता हुँदै शिक्षा, स्वास्थ्य र रोजगारीको हक समेटिएको हुन्छ ।

नेपालमा सामाजिक सुरक्षाको वर्तमान अवस्था

नेपालमा सामाजिक सुरक्षा कार्यक्रमहरुको माध्यमबाट गरीव, श्रमिक/मजदुर, वृद्ध वृद्धा, अशक्त, अपाङ्ग, विधवा, पिछडिएका सीमान्तकृत जनजाति, दुर्गम क्षेत्रका बासिन्दाको सुरक्षा र संरक्षण गर्ने प्रयास हुँदै आएको छ । देशको कमजोर आर्थिक अवस्थाका बाबजुद राज्यले सरकारी आयको ठूलो हिस्सा यस्ता कार्यक्रममा खर्चदै आएको छ । सामाजिक सुरक्षा कार्यक्रमहरुमा विगत २५ वर्ष देखि राज्यले गर्दै आएको खर्चले अपेक्षित नतिजा दिन नसकेको तथ्य अनुभूत गरी राज्यकोषबाट खर्च हुने कार्यक्रमहरुको प्रभावकारीता बढाउदै लाभग्राही जनताको अधिकतम हित गर्ने उद्देश्यले विगत २ वर्षमा ऐन नियम संशोधन गरी व्यवहारिक बनाइएको छ । संसोधित ऐन नियमका आधारमा नया' नियमावली तथा कार्यविधिहरु जारी गरिएका छन् । जसमा;

१. श्रम ऐन, २०७४
२. श्रम नियमावली, २०७५
३. योगदानमा आधारित सामाजिक सुरक्षा ऐन, २०७४
४. योगदानमा आधारित सामाजिक सुरक्षा नियमावली, २०७५
५. सामाजिक सुरक्षा योजना संचालन कार्यविधि, २०७५
६. रोजगारीको हक सम्वन्धि ऐन, २०७५ मुख्य रहेका छन ।

श्रम ऐन, २०७४ को व्यवस्था

श्रमिकको हक हित तथा सुविधाको व्यवस्था गर्न; श्रमिक र रोजगारदाताको अधिकार तथा कर्तव्यको स्पष्ट व्यवस्था गरी असल श्रम सम्बन्धको विकास गर्न; श्रम शोषणका सबै व्यवस्थालाई अन्त्य गरी उत्पादकत्व वृद्धि गर्न श्रम सम्वन्धी विद्यमान कानूनलाई संशोधन गरी नयाँ श्रम ऐन लागू भएको छ ।

श्रम ऐनका नवीनतम प्रावधानहरु देहाय अनुसार छन;

क) रोजगारीको वर्गीकरण गरिएको, १.नियमित रोजगारी २.कार्यगत रोजगारी ३.समयगत रोजगारी ४.आकस्मिक रोजगारी र ५.आंशिक रोजगारी
ख) काम गर्ने समय किटान, श्रमिकलाई प्रतिदिन आठ घण्टा र एक हप्तामा अठ्चालिस घण्टा भन्दा बढी समय हुनेगरी काममा लगाउन नपाइने ।
ग) ४८ घण्टा भन्दा बढी हुनेगरी श्रमिकलाई काममा लगाउनु परेमा प्रति दिन चार घण्टा र एक हप्तामा चौबीस घण्टासम्म अतिरिक्त समय काममा लगाउन सकिने र यस वापत नियमित काम गर्दा पाउने आधारभूत पारिश्रमिकको डेढी पारिश्रमिक भुक्तानी गर्नुपर्ने,
घ) रोजगारदाताले रोजगार सम्झौता नगरी काममा लगाउन नहुने,
ङ) श्रम ऐन सबै श्रमिक र उनीहरुसंग सम्वन्धित विषयमा न्यूनतम मापदण्डको रुपमा रहने,
च) कसैलाई पनि बा'धा श्रममा लगाउन नहुने,
छ) बालबालिकालाई काममा लगाउन नहुने,
ज) श्रमिकलाई धर्म, वर्ण, लिङ्ग, जातजाति, उत्पत्ति, भाषा, बैचारिक आस्था वा अन्य त्यस्तै आधारमा भेदभाव गर्न नपाइने,
झ) समान कामको लागि पारिश्रमिकमा भेदभाव गर्न नपाइने,
ञ) श्रम इजाजत नलिई विदेशी नागरिकलाई श्रमिकको रुपमा काममा लगाउन नपाइने,
ट) मुख्य रोजगारदाता, रोजगारदाता र श्रमिकहरुको दायित्व र आपसी सम्वन्धको स्पष्ट व्यवस्था गरिएको,
ठ) प्रत्येक प्रतिष्ठानले श्रम ऐन, नियमावली र प्रचलित कानून बमोजिम काम कारवाही भए नभएको सम्वन्धमा तोकिए वमोजिम श्रम अडिट गरी सोको प्रतिवेदन तयार गर्नुपर्ने,
ड) प्रत्येक दुई वर्षमा न्यूनतम पारिश्रमिक निर्धारण समितिको सिफारिस बमोजिम मन्त्रालयले न्यूनतम पारिश्रमिक निर्धारण गर्ने,
ढ) सामुहिक विवादको सम्वन्धमा मेलमिलाप गराउन तथा मध्यस्थता गर्न श्रम व्यवस्था ट्राइव्यूनल गठन गर्न सक्ने,
ण) अनुशासन, कर्तव्यपालना, आचरण र सजाय सम्बन्धि विस्तृत व्यवस्था,
त) नियमित रोजगारीमा रहेका श्रमिकले ५८ वर्षको उमेर पुरा भएपछि रोजगारीबाट अनिवार्य अवकाश पाउने,
थ) श्रम अदालतको गठन सम्वन्धि व्यवस्था ।

श्रम ऐनमा सामाजिक सुरक्षा सम्बन्धी प्रावधानहरु

श्रम ऐनको दफा २१ मा एकभन्दा बढी रोजगारदातासंग आंशिक

समयको लागि काम गर्ने श्रमिकको हकमा निज कार्यरत प्रत्येक रोजगारदाताले त्यस्तो श्रमिकले पाउने आधारभूत पारिश्रमिकको आधारमा उपदान, संचयकोष र सामाजिक सुरक्षा सम्वन्धी अन्य सुविधा वापतको योगदान गनुपर्ने व्यवस्था रहेको छ।

श्रम ऐनको दफा ५२ मा रोजगारदाताले प्रत्येक श्रमिकको आधार भूत पारिश्रमिकबाट दश प्रतिशत रकम कट्टा गरी सो रकममा शत प्रतिशत रकम थप गरी संचय कोष वापतको रकम जम्मा गर्नुपर्ने व्यवस्था गरेको छ। यस्तो रकम रोजगारदाताले सम्वन्धित श्रमिकले यो ऐन प्रारम्भ भएको मिति देखि नै लागू हुनेगरी निजको नाममा सामाजिक सुरक्षा कोषमा जम्मा गर्नुपर्ने व्यवस्था गरेको छ।

श्रम ऐनको दफा ५७ मा सामाजिक सुरक्षा कोष सम्वन्धी कानून बमोजिम संचय कोष, उपदान, औषधि उपचार, बीमा समेत सुविधा पाउने गरी सामाजिक सुरक्षा योजनामा योगदान गर्ने रोजगारदाता वा श्रमिकले योगदान गरेको हदसम्म यस परिच्छेद वमोजिम थप योगदान वा बीमा गर्नुपर्ने छैन भन्ने व्यवस्था गरेको छ।

उपरोक्त व्यवस्थाहरु सहित श्रम ऐनले श्रमिकहरुको सामाजिक सुरक्षा प्रत्याभूत हुनेगरी देहायका सुविधाहरु दिनुपर्ने व्यवस्था समेत गरेको छ।

क) प्रत्येक हप्तामा एक दिन साप्ताहिक विदा पाउने,
ख) प्रत्येक वर्ष मइ दिवस सहित तेह्र दिन पारिश्रमिक सहितको सार्वजनिक विदा पाउने,
ग) रोक्न नहुने वा लगातार गर्नुपर्ने काममा संलग्न श्रमिकले साप्ताहिक विदा वा सार्वजनिक विदाको दिनमा काम गरे वापत सट्टा विदा पाउने,
घ) काम गरेको अवधिको बीस दिनको एक दिनको दरले पारिश्रमिक सहितको घर विदा पाउने,
ङ) बार्षिक वाह्र दिन पारिश्रमिक सहितको विरामी विदा पाउने,
च) महिला श्रमिकले प्रसूतिको अघि वा पछि चौध हप्ताको प्रसूति विदा पाउने । यस्तो विदा वस्ने महिला श्रमिकले साठ्ठी दिनको पुरा पारिश्रमिक पाउनेछ भने बाँकी अवधिको पारिश्रमिक पाउने छैन।

योगदानमा आधारित सामाजिक सुरक्षा ऐन, २०७४

श्रमिकको योगदानमा आधारित समाजिक सुरक्षाको हक सुनिश्चित गर्न तथा योगदानकर्तालाई सामाजिक सुरक्षा प्रदान गर्ने सम्वन्धमा आवश्यक व्यवस्था गर्न विश्वव्यापी सामाजिक सुरक्षाको अवधारणा आत्मसात गर्दै नेपालमा पनि योगदानमा आधारित सामाजिक सुरक्षा ऐन, २०७४ लागू भएको छ। सरकारी सेवामा बहाल रहेको व्यक्ति वा सरकारी कोषबाट पारिश्रमिक पाउने व्यक्ति सरह अनौपचारिक क्षेत्रका श्रमिक तथा स्वरोजगारमा रहेका व्यक्तिले समेत योगदान कोषमा रकम जम्मा गरी सामाजिक सुरक्षा योजनामा सहभागि हुन सक्ने भएकोले यसले वृहत क्षेत्र समेटेको छ। हाल करीब ५ लाख राष्ट्रसेवकले संचयकोषमा योगदान गरिरहेकोमा सामाजिक सुरक्षा कोषले करीब ३५ लाख श्रमिक तथा स्वरोजगारकर्तालाई सामाजिक सुरक्षा योजनामा समेट्ने अपेक्षा गरिएको छ।

यो ऐनका प्रमुख प्रावधानहरु देहाय अनुसार छन् ;

क) सामाजिक सुरक्षा योजनामा योगदान गर्ने सबैले सामाजिक सुरक्षा कार्यक्रममा सहभागि हुन पाउने,
ख) रोजगारदाता सूचीकृत हुनुपर्ने। प्रत्येक सूचीकृत रोजगारदाताले आफूले नियुक्ति गरेको वा रोजगार सम्बन्ध कायम भएको प्रत्येक श्रमिकको योगदान र नियमानुसार थप गर्नुपर्ने रकम थपी नियमित रुपमा कोषमा जम्मा गर्नुपर्ने,
ग) अनौपचारिक क्षेत्रका श्रमिक तथा स्वरोजगारमा रहेका व्यक्ति सामाजिक सुरक्षा योजनामा सहभागी हुन सक्ने,
घ) अनौपचारिक क्षेत्रमा श्रमिक तथा स्वरोजगारमा रहेका व्यक्तिले योगदानको आधारमा कुनै एक वा एक भन्दा बढी सामाजिक सुरक्षा योजनामा सहभागि हुनेगरी छनौट गर्न सक्ने,
ङ) सामाजिक सुरक्षा योजनामा सहभागी भएको योगदानकर्तालाई सम्बन्धित सुरक्षा योजनामा तोकिए बमोजिमको सुविधा भुक्तानी हुने,
च) नियमित प्रकृतिको आय आर्जनमा संलग्न नरहेको तोकिएको श्रमशक्तिलाई सामाजिक सुरक्षा योजनामा सहभागी गराउने प्रयोजनको लागि नेपाल सरकारले तोकिए बमोजिमको योगदान त्यस्तो श्रमशक्तिको नाममा कोषमा जम्मा गरिदिन सक्ने,
छ) यो ऐन प्रारम्भ भएपछि सूचीकृत रोजगारदाताले आफूले नियुक्त गरेको व्यक्तिलाई नियुक्ति मितिले तीन महिना भित्र र ऐन प्रारम्भ हुँदाका बखत कायम रहेको रोजगारदाताले यो ऐन प्रारम्भ भएको मितिले ६ महिना भित्र कोषमा सूचीकरण गराई सक्नु पर्ने।

सामाजिक सुरक्षा कोषको स्थापना

सामाजिक सुरक्षा कार्यक्रमको संचालन र व्यवस्थापन गर्न सामाजिक सुरक्षा कोष (Social Security Fund) को स्थापना भएको छ। यो कोष आवर्ती कोष (Revolving Fund) को रुपमा रहने छ। यसमा देहाय वमोजिमको रकम रहने छ;

क) सामाजिक सुरक्षा योजनाको लागि योगदानकर्ता र रोजगारदाताबाट योगदानस्वरुप प्राप्त रकम,
ख) श्रम सम्बन्धी प्रचलित कानून बमोजिम श्रमिकको आधारभूत पारिश्रमिकबाट कट्टी हुने दश प्रतिशत र रोजगारदाताबाट संचयकोष वापत थप गर्ने दश प्रतिशत रकम,
ग) श्रम सम्बन्धि प्रचलित कानून बमोजिम रोजगारदाताले उपदान, निवृत्तिभरण र अन्य सुविधा वापत श्रमिकलाई उपलब्ध गराउनु पर्ने रकम,
घ) बोनस सम्बन्धि प्रचलित कानून बमोजिम राष्ट्रिय स्तरको कल्याणकारी कोषमा जम्मा भएको र जम्मा हुन आउने रकम,
ङ) सामाजिक सुरक्षा कर वापत हालसम्म संकलित र भविष्यमा संकलन हुने रकम,
च) नेपाल सरकारबाट प्राप्त अनुदान,
छ) विदेशी सरकार, अन्तर्राष्ट्रिय संघ संस्थाबाट प्राप्त अनुदान, सहयोग वा ऋण रकम,
ज) कोषको रकम लगानीबाट प्राप्त हुने व्याज तथा मुनाफाको रकम,

झ) नेपाल सरकारबाट ऋण स्वरुप प्राप्त हुने रकम र

ञ) अन्य कुनै स्रोतबाट प्राप्त रकम ।

योगदानमा आधारित सामाजिक सुरक्षा योजना कार्यान्वयनको पक्ष

योगदानमा आधारित सामाजिक सुरक्षा ऐन, नियमावली र सामाजिक सुरक्षा योजना संचालन कार्यविधि, २०७५ को कानूनी आधारमा सामाजिक सुरक्षा योजना २०७५ मंसिर ११ देखि शुरु भएको छ । यस योजनामा सहभागी हुन सर्वप्रथम रोजगारदाताले अनलाइन सूचीकरण हुनुपर्दछ । आफू सूचीकरण भएको तीन महिना भित्र रोजगारदाताले आफ्ना कर्मचारी तथा श्रमिकको समेत सूचीकरण गरिसक्नु पर्नेछ । सूचीकरण पश्चात रोजगारदाताले कर्मचारी तथा श्रमिकको आधारभूत ११ प्रतिशत रकममा रोजगारदाताको २० प्रतिशत रकम थप गरी कुल ३१ प्रतिशत बराबरको योगदान रकम मासिक रुपमा कोषमा जम्मा गर्नु पर्नेछ ।

योजना (Scheme) अन्तर्गत पाइने सुविधाहरु

नेपाल सरकारले सामाजिक सुरक्षा कोष संचालक समितिको सिफारिसमा सामाजिक सुरक्षाको थप योजनाहरु चरणवद्ध रुपमा संचालन गर्नेछ । हाल सामाजिक सुरक्षा योजनाको शुभारम्भ संगै देहायका ४ वटा सुविधाहरु दिने व्यवस्था गरिएको छ;

१. औषधि उपचार स्वास्थ्य तथा मातृत्व सुरक्षाको सुविधा

यस अन्तर्गत चिकित्सकको परामर्श सेवा, अस्पताल भर्ना तथा शल्यकृया वापतको शुल्क, रोग परीक्षण तथा उपचार वापतको खर्च र औषधि वापतको सुविधा पाइन्छ । अस्पताल भर्ना भई उपचार गराउँदा वार्षिक रु. एक लाख र अस्पताल भर्ना नभै उपचार गराउँदा बार्षिक पच्चीस हजार रुपैयामा नबढ्ने गरी उपचार खर्च पाइन्छ । तर कुल दावी रकमको २० प्रतिशत रकम योगदानकर्ता आफैले व्यहोर्नु पर्दछ ।

मातृत्व सुरक्षा योजनामा गर्भ परीक्षण, अस्पताल भर्ना, शल्यकृया तथा तीन महिना सम्मको शिशुको उपचार वापतको खर्च र प्रसूति स्याहारको लागि एक महिना बराबरको न्यूनतम पारिश्रमिक पाइन्छ ।

औषधि उपचार र स्वास्थ्य सुविधा पाउन कम्तिमा ६ महिनाको योगदान गरेको हुनुपर्दछ भने मातृत्व सुरक्षा सुविधा पाउन पछिल्लो अठार महिनामा कम्तिमा १२ महिनाको योगदान गरेको हुनु पर्दछ ।

२. दुर्घटना तथा अशक्तता सुरक्षाको सुविधा

रोजगारीजन्य दुर्घटना तथा व्यवसायजन्य रोगको उपचारमा लाग्ने सम्पूर्ण खर्च पाइन्छ । तर व्यवसायजन्य रोगको उपचार गर्न दुई वर्षसम्म योगदान गरेको हुनुपर्दछ । रोजगारजन्य दुर्घटना बाहेक अन्य दुर्घटना भएको अवस्थामा रु. सातलाख सम्मको उपचार खर्च स्कीमबाट प्राप्त हुनेछ । तर प्राकृतिक विपत्तिको कारण दुर्घटना भएकोमा वा सडक दुर्घटना भएकोमा वा अन्य बीमा प्रणाली बाट सुविधा पाउने अवस्थामा कोषको स्कीमबाट त्यस्तो सुविधा प्राप्त हुने छैन ।

३. आश्रित परिवार सुरक्षाको सुविधा

योगदानकर्ताको मृत्यु भएमा आश्रित परिवारलाई प्राप्तहुने सुविधा अन्तर्गत निजको परिवार पतिलाई योगदानकर्ताको अन्तिम आधारभूत पारिश्रमिकको साठ्ठी प्रतिशतका दरले मासिक रुपमा जीवित रहेसम्म निवृत्तिभरण (पेन्सन) र निजको १८ वर्ष उमेर पुरा नभएको सन्ततिलाई १८ वर्षका उमेरसम्म चालिस प्रतिशत सन्तति शैक्षिक वृत्ति पाउने व्यवस्था छ । यसैगरी योगदानकर्ताको एकाघरको पति वा पत्नि वा छोराछोरी कोही पनि नभएको अवस्थामा निजको आश्रित बाबु आमाले मासिक रुपमा साठ्ठी प्रतिशत रकम जीवनभर पाउने व्यवस्था छ ।

४. वृद्धावस्थाको सुरक्षाको सुविधा

योगदानकर्ताको अवकाश पछि अवकाश योजना वा निवृत्तिभरण (पेन्सन) मध्ये एउटा सुविधा पाउने व्यवस्था छ ।

क) अवकाश योजनामा हाल संचय कोष र उपदान पाउनेले अवकाश पछि एकमुष्ट रकम पाउने व्यवस्था छ,

ख) पेन्सन योजनामा योगदानकर्ताले जीवित रहेसम्म मासिक पेन्सन पाउने व्यवस्था छ । अवकाश योजना पाउनेले सामुहिक सौदावाजी गरी संचयकोष र उपदानको हालसम्मको रकम कोषमा जम्मा गराई पेन्सन पाउन सक्छन । तर २०७६ साल साउन १ गतेपछि रोजगारीमा प्रवेश गर्ने सबैले अनिवार्य रुपमा पेन्सन स्कीममा सहभागी हुने कानूनी व्यवस्था छ ।

यसरी सर्वजन हिताय सर्वजन सुखाय को परिष्कृत रुप आधुनिक समयको लोक कल्याणकारी राज्य हो । यूगीन मान्यताहरुलाई आत्मसात गर्दै आजको समयसम्म आइपुग्दा लोक कल्याणकारी राज्यको अवधारणामा सबै नागरिकलाई आधारभूत सुख, सुविधा सुनिश्चितता गर्ने प्रयास शुरु भएको छ । रोग, भोक र अशिक्षाको अँध्यारोबाट सबैलाई मुक्त गर्ने विश्वव्यापी अभियान अर्थात सहश्राब्दी विकाश लक्ष्य (Millenium Development Goal-MDG) को मुख्य बाधक तत्वको रुपमा गरीबी, असमानता र कुसंस्कार देखिएका छन । नेपालको संविधान २०७२ ले परिकल्पना गरेको सामाजिक न्याय (Social Justice) सहितको समावेशी लोकतन्त्रको सफलता सामाजिक सुरक्षा कार्यक्रमको सफलतामा अडेको छ । सरकारी कोषबाट तलब सुविधा प्राप्त गर्ने राष्ट्र सेवकहरु सरह जीवनभर राज्यको हित खातिर काम गर्ने अनौपचारिक क्षेत्रका श्रमिक, मजदुर तथा स्वरोजगारमा रहेका लाखौ किसान, साना उद्यमी/व्यवसायी सबैलाई समेट्ने वृहत सामाजिक सुरक्षा योजनाको माध्यमबाट नै समानता (Equity) समृद्धि (Prosperity) र विकास (Development) को महाअभियान प्रारम्भ हुनेछ । बढ्दो गरीबी र असमानताको खाडल पुर्ने र समाज सबैका लागि बस्न लायक स्थान बनाउने दिशामा यो एक महत्वपूर्ण कोशेढुंगा बन्ने छ ।

Discussion on Viability Problem of Airport Projects

Shaligram Poudyal
Former Director, CAAN

Civil Aviation Authority of Nepal (CAAN) Act 2053, Clause 18 provides guidelines on the operational modality of CAAN. The Act clearly states that "the (CAAN) Board shall follow the business principles while discharging the functions of the Authority". Accordingly CAAN board has also developed guidelines on "Budgeting and Budgetary Control". Section 4.2.3 of the guidelines mentions, "As CAAN is supposed to generate its own fund for financial capital expenditure, financial viability is most important". While deciding on capital budget investment, the financial viability of the project is to be evaluated. "Generally a capital expenditure project should be able to pay back its expenditure within five years. Furthermore, incremental operating and financial cost should be less than incremental revenue generated by the capital item planned to be acquired. To evaluate financial viability, tools such as Net Present Value (NPV) and Internal Rate of Return (IRR) should be analyzed". This guideline has also provided a Form format (No. B2) to required to submit 10 years incremental cash inflow, incremental cash outflow, and net cash inflow summary to show project's justification.

ICAO Manual on Airport Planning (Doc. 9184-AN/902 Part 1) Master Planning has mentioned the importance of preliminary economic feasibility of a new airport. It states, "The financial burden of major airport expansion or development of a new airport can be formidable. In order to determine the significance of this burden and the problems of financing such development, very early determination of economic feasibility is advisable (Para 2.4.1). A comparison of quantifiable economic benefits and costs, computed by using the appropriate opportunity cost of capital should be made and the benefit/cost ratio and the rate of return applicable to the anticipated development should be estimated (Para 2.4.2)". Further it says, "Once the availability of adequate capital has been established, a realistic assessment needs to be made of the financial provision that would be required annually if the airport authority is to discharge its debt obligations (i.e. capital repayment and interest charges) and build up replacement reserves (Para 2.5.1)

Despite such provisions of the Act and the Budgetary Guidelines, we have invested in a dozen or more domestic airport development, expansion and concrete pavement projects without being rigid to economic and financial feasibilities. A few of the examples are concrete pavement works into non-operational airports (Manang and Dang) and four chartered operation airports (Taplejung, Rumjatar, Rukum Salley and Rukum Chaurjhari). We are also investing in four new airports (Arghakhanchi, Gulmi, Ilam and Lumjung). Financial viability of these airports has not been analyzed as per the provision of section 4.2.3 and Form B2 of the Budgetary Control Guideline. Clause 18 of CAAN Act is not followed in this regard. Thus relaxation in development capital expenditure project's financial viability analysis has established loose values and is consequently triggering weak financial health of CAAN.

Air connectivity requirement within the country is being replaced by spreading road accesses in many districts. Those airports felt necessary for connectivity a decade ago are now not necessarily important from connectivity point of view. As a result of road connectivity expansion non-operational airports have increased from 12 to 20 now. Seven others airports operate only chartered flights.

Investment in Gautam Buddha Airport Upgrading Project:

CAAN is developing Gautam Buddha Airport (GBA) to serve international flights. With a runway of 3000 meter and with four international parking bays it will serve to 4E category aircrafts (i.e. Boeing 777-200, Airbus 330-300 type). Total investment in GBA will be US$ 85.557 million including ADB/OEID loan/grant assistance. Main objective of GBA upgrading is to increase Buddhist tourist by establishing air connectivity in Buddhist Circuit. Lumbini of Nepal, the birthplace of Gautam Buddha and Bodhgaya, Saranath and Kushinagar of India are included in the Buddhist Circuits. There are about 535 million Buddhist population in the world, most of them residing in Asia & Pacific region. Maya Devi Temple of Lumbini the actual birth place of Siddhartha Gautam is one of the most sacred

pilgrimage destinations of Buddhism.

GBA upgrading is also intended to serve as an alternate international airport for TIA, Kathmandu. Alternate international airport is necessary in Nepal when landing in TIA is not possible due to bad weather conditions or other technical reasons. GBA's financial Internal Rate of Return (FIRR) was mentioned to be 12.9%. Our analysis is not positive. A rough analysis of annual revenue and cost estimate for up to 2033 gave an idea that this airport's annual loss may come to be Rs. 339 million even after 13 years of its operation. Therefore Airport Development Fee (ADF) collected in TIA is to be diverted for debt servicing of GBA'S loan. Although there is financial viability gap, this airport will create economic multiplier effect by boosting tourist arrivals and providing alternate international airport facility within Nepal.

Investment in New Pokhara Airport:

Pokhara is one of the most visited tourist destination of Nepal. World famous Annapurna circuit trekking route is also near its vicinity. In 2017 Pokhara Airport handled 373403 passengers with the domestic aircraft movement numbering to 28106. Presently ATR72 type aircraft can operate in its 1440 meter long runway. Due to proximity of hills around Pokhara Valley, aircrafts bigger than ATR72 (such as Fokker 100) could not be operated in the past.

New Pokhara International Airport (NPKR) is being developed in an area of 200 hectare in Chhinne Danda near the Pokhara city. The conceptual master plan of the new NPKR is designed to the category 4D standard set by the ICAO. Runway length will be 2500 meter long and 45m wide. Terminal building capacity will be for one million passengers per annum. It will support operations of commercial aircraft such as Airbus A320, Boeing 737-700 series, and Boeing 757-200. Hill proximity limitation has been a barrier to future expansion of runway of NPKR in the new site of development. Therefore, increasing runway length to 3000 meters and aiming to operate bigger than ICAO 4D type aircraft cannot be a vision. The airport's elevation of about 2650ft. from sea level also creates some load penalty to restrict Maximum Takeoff Weight of aircraft.

Construction contract of NPKR is awarded to China CAMC Engineering Co. Ltd in Engineering Procurement Construction (EPC) model. Total project cost is 215.965 million US$. On 21st March 2016, Ministry of Finance (MoF) signed loan agreement with China. MoF and CAAN have signed Subsidiary Loan Agreement (SLA) on 5th June, 2016. Applicable interest rate is 5%. USD215.965 million loan is financed from the Export-Import Bank of China. The airport development is expected to be completed by 2020. Commercial operation will start from 2021. Total loan amount in NRs comes to Rs. 23045.63 million (@ 1US$=Rs.106.71 exchange rate of agreement date 21st March 2016).

CAAN's debt servicing of NPKR will start from the fiscal year 2022/23 (2079/80 B.S). At a 5% rate and payment period of 20 years, the interest and principle amount payable annually will be Rs. 2304.56 million. Operation Maintenance and Overhead Costs (OMOC) may come to be about 168.7 million (assumed as20% of TIA's OMOCs). With OMOC cost, annual cash expense requirement will be Rs. 2473.26 million. On the revenue side, after 4 years of operation (i.e. in the year 2025) assuming international outgoing passengers to reach 400 thousand, and domestic 250 thousand, the total PSC revenue would be about Rs. 284.2 million.* Other incomes (assumed to be 45% of total revenue) would be about Rs. 232.5 million and total revenue about Rs. 516.7 million. Still there will be a huge cash deficit of Rs. 1956.56 million. Let us assume that government decides to levy ADF of Rs. 1000 (with VAT)/PAX in NPKR. Additional Rs.353.9 million could be generated from ADF. Even with ADF income, NPKR will have to bear cash shortage of Rs. 1602.66 million. Here, the question arises, how could this cash shortage be managed?

By any means, we must have to manage this cash shortage to pay the Chinese debt. Total solution of this problem may be that government takes the burden of loan by converting loan into equity. In that situation CAAN may be able to bear operation and maintenance costs. Could it be done within existing policies? Clause 5.5 of Aviation Policy 2063 has some provisions. Clause5.5 states that, for the Regional Hub Airport development, CAAN shall contribute 15% and the Government will bear 70% of the costs. For remaining 15%, Local Bodies and the private parties shall invest in the project. In case, the Local Body's and the private party's investment is in short/excess, Government's share of contribution shall be adjusted accordingly. If this clause of Aviation Policy is implemented, CAAN has to bear only 15% (Rs.3456.84 million) of the Chinese Loan. Anyway, sooner or later, this cash shortage problem must be solved. To work upon solving this problem now (i.e. five years ahead) would be a visionary approach.

The Way Forward:

For managing a public entity, there is no other way than to follow legal provisions, Rules, Regulations and Procedures. CAAN being an airport operator and natural monopoly business holder, there are no competitors in the market. As such there is no chance of arising loss in its business. But if we are not managing our business sustainably, there is no one to blame but ourselves. If there is pressure from political leaders, they could be convinced with appropriate facts, figures and advocacy.

Business principles means any investment should not be decided which creates net loss in the long run. Long run means a period more than five years. Ten years net positive cash flow generating projects selection is our budgetary guideline. A big challenge to CAAN management is how the legal provision and budgetary guidelines could practically be followed.

Certainly there is another side of CAAN's role. CAAN is also a part of government system, a partner of government for our nation building. We cannot avoid taking responsibilities to implement justifiable government policies and programs. Government has also some basic policies to choose a development project. Government projects need an EIRR rate of 16% or more. We should first of all analyze economic IRR and financial IRR of the project. If the projects are not financially viable, the amount of viability gap should be calculated and submitted to the government for Viability Gap Funding (FGF). Government should bear the viability gap with subsidy or with equity investment. Aviation policy 2063 clause 5.5 has already incorporated such modality and was implemented in Surkhet airport expansion project. Other countries are also adopting VGF modality in airport development. For example Delhi Airport expansion under PPP model had a viability gap of INR 3415 crore. This was compensated with ADF fund raised until April 2016. Likewise, there was 40% viability gap in Kushinagar Airport project out of its cost of INR 350 crore. India central government is bearing 20% and UP government 20% of Kushinagar Airport's VGF. India has also created INR 45000 million funds to develop new and existing regional airports.

To Sum Up:

On the basis of above discussion, we can draw some conclusions on investment decision of CAAN. Firstly, in deciding airport projects whether domestic or international the guiding principle is to be based on clause 18 of CAAN Act. Following the business principles guideline is paramount for CAAN's sustainability. Secondly, Aviation Policy 2063 is favorable to this principle. Policy is providing that in Regional Hub Airport development, government's investment shall be 70% and CAAN will bear 15%. For new small airport development, local bodies, local people's participation or joint investment modality shall be adopted. Third point is that, CAAN's budgetary guidelines do not permit to invest in loss making projects. Considering these provisions CAAN should prepare detailed project analysis of each project to identify financial viability. For New Pokhara airport as well CAAN should identify viability gap amount and submit to the government. Evaluating the financial viability gap, government should bear 85% (70%+15%) of the NPKR's project cost. Government's responsibility to bear up to 85% of project cost comes from clause 5.5 of the Aviation Policy 2063.

Existing legal, policy wise and procedural provisions are positive, supportive in CAAN's independent decision. Therefore CAAN should not hesitate to invest only on feasible projects and defend to not involve in loss making airport projects. The opportunity of adopting business principle based strategy was missed in the past and some sort of soft values gradually came developing. Let us learn from the past shortcomings. The situation has not been uncontrollable as yet. Still, we can build and maintain financial strength of CAAN. One additional thing we could do is creation of general reserve fund in our Balance-sheet by transferring 25% of our profit in the general reserve fund. Year by year this fund should grow until it is equal to the amount of CAAN's paid up capital. In this regard Ministry of Finance (MoF) had also given directives to all government corporations in 2060's. General reserve fund is a saving for a rainy day. With 70% government takeover of NPKR airport's liability and with financial viability based investment, CAAN could be the MINIRATNA public sector entity of Nepal.

Note: -*PSC income calculation rate is based on annex 20 of Airport Service Charge Rules 2067. For International PSC is taken at Rs 600 per PAX, the average of Rs 700 for non-SAARC flights and Rs.500 for SAARC flights.

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सूचनाको हक: आजको आवश्यकता

क. पृष्ठभूमि

कुनै पनि लोकतान्त्रिक शासन प्रणालीमा पारदर्शिता सूचना प्रवाहको महत्वपूर्ण अङ्ग हो । राष्ट्रिय सरोकारको विषयमा आमनागरिकले सूचना माग्ने र पाउने जन्मसिद्ध अधिकार हो । लोकतान्त्रिक शासन व्यवस्थामा नागरिक नै सर्वेसर्वा र निर्णायक भूमिकामा हुन्छन् । नागरिकबाट कर संकलन गरेर, राज्यकोषबाट खर्च गरेर र वैदेशिक ऋण, अनुदान तथा सहयोगबाट सरकारले राज्यको गतिविधि/क्रियाकलापहरु सञ्चालन गर्ने हुँदा ती सबै विषयमा नागरिकले सूचना, जानकारी र तथ्याङ्क प्राप्त गर्ने नैसर्गिक अधिकार राख्दछ । सूचना नागरिकको मौलिक अधिकार हो । सूचना नै लोकतन्त्रको मुख्य आर्दश, मूल्य, संस्कार र मान्यता हो । सार्वजनिक निकायका पदाधिकारीहरुले सार्वजनिक विषयको सूचना मागेको बखत कुनै पनि नागरिकलाई उपलब्ध गराउनु पर्दछ ।

सूचनाको अधिकार कुनै पनि व्यक्तिको मौलिक र आधारभूत अधिकार हो । विश्वविख्यात फ्रान्सेली दार्शनिक Michael Focaut ले शक्ति ज्ञानबाट प्राप्त हुन्छ र सूचना ज्ञानको आधारभूत पक्ष हो भनेका छन । नागरिकलाई सुसूचित र सशक्तिकरण बनाउनु राज्यको दायित्व हो र राज्यको गतिविधि/क्रियाकलापप्रति सचेत र जानकार हुनु आमनागरिकको कर्तव्य हो । सूचनाको हकको सिद्धान्तले राज्य सरकारलाई पारदर्शी, जनउत्तरदायी, जिम्मेवार र सर्वशक्तिमान बनाउन उत्प्रेरणा जागृत गर्दछ । वास्तवमा सूचना नागरिकका लागि शक्ति र अवसर हो भने सरकारका लागि जनविश्वास, नीतिगत र वैधानिक आधार हो । सूचनालाई लोकतन्त्रको प्राणवायु/अक्सिजन पनि भन्न सकिन्छ । सूचनाको आवश्यकता लोकतन्त्रको संस्थागत विकास, विस्तार र सुदृढीकरणको लागि कोशेढुंगा सावित हुन सक्छ । सूचनाको हक अन्य हकहरुको पूर्वाधार हो । यो सबै विकार हरुको सर्वोपरि औषधि हो । सूचना सुशासनको Master Key हो ।

ख. विकासक्रम

१) Sweden मा सन् १७६६ डिसेम्बर २ मा Freedom of Press Act आयो । सूचनाको हक सम्बन्धी विश्वको पहिलो ऐन नै यही हो । Sweden बाट सूचनाको हकको पहिलो खुड्किलो प्रारम्भ हुन्छ । Sweden को संसदमा सूचनाको हकको विधेयक पेश गर्ने व्यक्ति पादरी Anders Chydenius हुन् । Freedom of Press Act ले नागरिकले तिरेको करबाट सरकारले कसरी खर्च गरिरहेको छ भन्ने सूचना वा जानकारी पाउन सक्ने र आमनागरिक र पत्रकारद्वारा सरल, छिटो छरितो र चुस्त रुपले सूचना प्राप्त गर्न सक्ने व्यवस्था गरेको थियो त्यस ऐनमा ।

२) सन् १८०० मा अमेरिकाको अदालतबाट जनताको जान्न पाउने हक सम्बन्धी फैसला ।

३) सन् १९६६ मा अमेरिकामा Freedom of Information Act जारी भएको पाइन्छ जसलाई Sunshine Law भनी चिनिन्छ ।

४) बेलायतले सन् १९११ मा प्रकाशित गरेको Official Secret Act सन् १९८९ मा संशोधन गरी जनताले प्राप्त गर्ने सूचनाहरुको प्रकृति, प्रकाशित गर्न नहुने सूचनाहरु तथा अति गोप्य सूचनाहरु सार्वजनिक गरेमा फौजदारी अपराध मानी सजाय गर्ने सकिने कानूनी प्रावधान समेटिए ।

५) सन् १९७० मा Norway

६) सन १९७८ मा France / Netherlands

७) सन् १९८२ मा Australia, New Zealand / Canada

८) सन् १९८५ मा Denmark

९) सन् १९८६ मा Greece

१०) सन् १९८७ मा Austria

११) सन् १९९० मा Italy

१२) सन् २००० मा EU को Charter of Fundamental Rights बन्यो जसमा अभिव्यक्तिको स्वतन्त्रता सूचनाजन्य सामग्रीहरुको पहुँचको अधिकारलाई समावेश भएको थियो ।

१३) सन् २००२ मा भारतमा The Freedom of Information Act निर्माण भै २ अक्टोबर २००५ मा सो ऐन कार्यान्वयनमा आयो ।

१४) अहिलेसम्म सूचनाको हक कार्यान्वयन गर्ने मुलुकहरुको संख्या ११७/११८ भन्दा बढी पुगेकोछ ।

ग. नेपालको सन्दर्भमा सूचनाको हक सम्बन्धी व्यवस्था

१) नेपाल अधिराज्यको संविधान, २०४७ को धारा १६ मा सूचनाको हक सम्बन्धी संवैधानिक व्यवस्था भएको देखिन्छ । जसमा "प्रत्येक नागरिकलाई सार्वजनिक महत्वको

कुनै पनि विषयको सुचना माग्ने हक हुनेछ।" भनिएको थियो। सूचनाको सम्बन्धी संवैधानिक व्यवस्था भए तापनि ऐनको यो हक प्रभावकारी रुपमा कार्यान्वयन हुन सकेन।

२) नेपालको अन्तरिम संविधान, २०६३ को धारा २७ मा "कुनै पनि नागरिकले कुनै पनि सार्वजनिक निकाय बाट आफ्नो वा सार्वजनिक सरोकारको सूचना माग्ने र प्राप्त गर्ने हक हुनेछ" भनी स्पष्ट व्यवस्था छ।

३) २०६४ श्रावण ५ गते सूचनाको हक सम्बन्धी ऐन, २०६४ जारी भयो।

४) २०६५ माघ २१ गते सूचनाको हक सम्बन्धी नियमावली, २०६५ जारी भयो।

५) २०६५ सालमा राष्ट्रिय सूचना आयोगको स्थापना।

६) नेपालको संविधानको धारा २७ मा "प्रत्येक नागरिकलाई आफ्नो वा सार्वजनिक सरोकारको कुनै पनि विषयको सूचना माग्ने र प्राप्त गर्ने हक हुनेछ" भनी सूचनाको हक सम्बन्धी व्यवस्था भएको।

घ. सूचनाको हक सम्बन्धी सिद्धान्त/मार्गदर्शनहरु

१) अधिकतम सार्वजनिकीकरणको सिद्धान्त (Maximum Disclosure Principle)

२) खुला र पारदर्शी सरकारको प्रबर्द्धनमा जोड (To promote open and transparent system)

३) केही अपवादहरु विद्यमान हुन सक्छन र तिनीहरुको सीमित रुपमा मात्र प्रयोग गर्नु पर्छ (Limited Scope of Exceptions)

४) सरल कार्यविधि (Simple Procedure) सूचना माग्ने र पाउने विधि सरल र छिटो हुनु पर्दछ।

५) सूचनाको वर्गीकरण (Classification of Information)

६) सूचना प्रकाशन गर्ने दायित्व राज्य वा सार्वजनिक निकायलाई तोकिनु पर्छ (Key obligation to publish should be bourne by the state)

७) सूचनादाता र सूचना मागकर्ताको संरक्षण गरिनुपर्छ (Protection of Whistle-blowers)

८) खुला बैठक (Open Meeting) : सार्वजनिक निकाय र सार्वजनिक सरोकारवालाहरु बीच खुला क्रिया/अन्तर्क्रिया/बहस/छलफल/बैठक हुनुपर्छ।

९) खुला सरकारको प्रबर्द्धन (Promotion of Open Government)

१०) सूचना सित्तैमा पाउने पहुँच (Free of Cost)

ङ. सार्वजनिक निकाय, सूचना र सूचनाको हक

क) सार्वजनिक निकायबाट सम्पादन हुने वा भएको सार्वजनिक महत्वको काम र तत्सम्बन्धी कारवाही वा निर्णयसँग सम्बन्धित कुनै लिखित सामाग्री वा जानकारी। दफा २ (ख)

ख) सार्वजनिक निकायमा भए गरेको काम कारवाही खुला र पारदर्शी बनाउनका लागी ऐन द्वारा प्रदत्त सार्वजनिक महत्व र सरोकारको सूचना माग्ने वा प्राप्त गर्ने अधिकारनै सूचनाको हक हो। यस हकले नागरिकलाई निम्न अधिकारको सुनिश्चित गरेको हुन्छ : कुनै सार्वजनिक निकायमा रहेको लिखित तथा सामाग्रीको अध्ययन, अनुसन्धान गर्ने तथा प्रमाणित प्रतिलिपी प्राप्त गर्ने। सार्वजनिक निकाय, सूचना र सूचनाको हक सार्वजनिक महत्वको निमार्ण कार्य भएको स्थानको अध्ययन, अवलोकन भ्रमण गर्ने र प्रमाणित नमुना लिने। कुनै पनि यन्त्रको संचालन सम्बन्धी सूचना प्राप्त गर्ने आदी। दफा २ (छ)

ग) सार्वजनिक निकायहरु : संवैधानिक निकाय र सरकारी कार्यालयहरु राजनीतिक दल, राष्ट्रिय/अन्तर्राष्ट्रिय गैरसरकारी संघ संस्थाहरु, निजी क्षेत्र र ऐन द्वारा स्थापित सबै निकायहरु सार्वजनिक निकाय हुन।

च. सूचनाको हक प्रवाह गर्ने बाध्य नहुने क्षेत्र प्रत्येक नेपाली नागरिकलाई सार्वजनिक निकायमा रहेको सूचनामा पहुँच हुनेछ र ऐनको अधीनमा रही सूचना प्राप्त गर्ने हक भए तापनि देहायका विषयमा सूचना प्रवाह गर्न बाध्य हुनु पर्दैन :

१) नेपालको सार्वभौमसत्ता, अखण्डता, राष्ट्रिय सुरक्षा, सार्वजनिक शान्ति, सुव्यवस्था वा अन्तर्राष्ट्रिय सम्बन्धमा गम्भीर खलल पार्ने,

२) अपराधको अनुसन्धान, तहकिकात तथा अभियोजनमा प्रत्यक्ष असर पार्ने,

३) आर्थिक, व्यापारिक तथा मौद्रिक हित वा बौद्धिक सम्पत्तिको संरक्षण वा बैकिङ वा व्यापारिक गोपनीयतामा गम्भीर आघात पार्ने,

४) विभिन्न जातजाती वा सम्प्रदाय बीचको सुसम्बन्धमा प्रत्यक्ष खलल पार्ने,

५) व्यक्तिगत गोपनीयता र व्यक्तिको जीउँ-ज्यान, सम्पत्ति, स्वास्थ्य वा सुरक्षामा खतरा पुऱ्याउने।

तर सूचना प्रवाह गर्नु नपर्ने उचित र पर्याप्त कारण भएको बाहेक अन्य कारणवस सूचना प्रवाह गर्ने दायित्वमा पन्छिन मिल्दैन।

छ. सूचनाको अद्यावधिक र स्वत: प्रकाशन सम्बन्धी व्यवस्था

- आफ्नो निकायको सूचना अद्यावधिक गरी राख्नु पर्ने,
- ऐन लागू हुनु भन्दा २० वर्ष अघिसम्मका आफ्नो निकायसँग सम्वाद-सूचना अद्यावधिक गर्नु-गराउनु पर्ने।
- सार्वजनिक निकायले ऐनमा व्यवस्था भएको १३ वटा र नियमावलीमा भएको ७ वटा गरी २० हक प्रत्येक

३/३ महिनामा आफ्नो निकायको सूचना विवरण स्वतः प्रकाशन गरी सार्वजनिकीकरण गर्नु पर्दछ । सोको विवरण राष्ट्रिय सूचना आयोगमा समेत पठाई Website मा राख्नु पर्दछ ।

ज. सूचना अधिकारी, सूचना प्राप्त गर्ने कार्यविधि र सूचना वापत लाग्ने दस्तुर

- सूचना अधिकारी प्रत्येक सार्वजनिक निकायले सूचना प्रवाहको लागि आवश्यकतानुसार सूचना शाखाको व्यवस्था गरी सूचना अधिकारीको व्यवस्था गर्नु पर्छ ।
- सूचना प्रवाहको लागि प्रत्येक कार्यालय प्रमुखले सूचना अधिकारीलाई नियमति रुपमा सूचना उपलब्ध गराउनु पर्छ ।
- सूचना अधिकारी तोक्दा, प्रशासकीय प्रमुखले आफूभन्दापछिको पहिलो वा दोस्रो वरिष्ठतम अधिकारीलाई तोक्नु पर्छ ।
- सूचना प्राप्त गर्ने कार्यदेखि निवेदनको ढाँचा नतोकिएकोले सूचना अधिकारी समक्ष निवेदन दिने सूचना अधिकारी नतोकिएको अवस्थामा सोझै कार्यालय प्रमुख समक्ष निवेदन दिने ।
- सूचना अधिकारी, सूचना प्राप्त गर्ने कार्यविधि र सूचना वापत लाग्ने दस्तुर :
- सूचना माग गर्नुको कारण खुलाउनु पर्छ ।
- निरक्षर र शारीरिक अपाङ्गता भएका व्यक्तिले पनि मौखिक सूचना माग गर्न सक्छ ।
- कुनै व्यक्तिको जीउ-ज्यानको सुरक्षासँग सम्बन्धित सूचना भए २४ घण्टा भित्र उपलब्ध गराउनु पर्छ ।
- अन्य सूचना भए सूचना अधिकारी समक्ष निवेदन गरेको १५ दिन भित्र प्राप्त हुन्छ ।
- सूचना अधिकारीले सूचना नदिएको भनेर कार्यालय प्रमुख समक्ष निवेदन दिनु पर्छ र कार्यालय प्रमुखले ७ दिन भित्र सूचना दिनुपर्छ ।
- कार्यालय प्रमुखले सूचना दिन इन्कार गरेमा राष्ट्रिय सूचना आयोगमा पुनरावेदन गर्न सकिन्छ ।

झ. सूचना अधिकारी, सूचना प्राप्त गर्ने कार्यविधि र सूचना वापत लाग्ने दस्तुर

- सूचना माग गर्दा टिकट टाँस्नु पर्दैन ।
- प्रचलित कानूनमा छुट्टै दस्तुरको व्यवस्था भएमा सोही अनुसराको दस्तुर र नभएमा निम्नानुसार दस्तुर बुझाउनु पर्छ ।
- पहिलो १० पृष्ठ सम्मको सूचनामा शुल्क नलाग्ने ।
- सामान्य आकारको (८.३ इन्च चौडाई र ११.७ इन्च लम्बाई सम्म साइज) को कागजमा तयार भएको सूचनाको लागि प्रतिपृष्ठ रु ५/- र सो भन्दा बढीको भए प्रतिपृष्ठ रु १०/-
- सूचना अधिकारी, सूचना प्राप्त गर्ने कार्यविधि र सूचना वापत लाग्ने दस्तुर :
- Diskette, CD र अन्य विद्युतीय माध्यमको सूचना भए प्रति Diskette, CD रु. ५०/-
- कुनै लिखत, सामग्री,अध्ययन, अवलोकन गर्ने भए आधा घण्टा निशुल्क र त्यसपछि आधा घण्टाको प्रसत व्यक्ति रु. ५०/-
- प्रमाणित प्रतिलिपिप उपलब्ध गराउनु पर्ने भए फोटोकपि गर्दा लाग्ने वास्तविक खर्च वरावरको शुल्क ।
- सूचना वापतको दस्तु प्रत्येक दुई वर्षमा पुनरावलोकन हुनेछ । सूचना वापतको दस्तुर नगदै वा वैंकको जम्मा गरेको भौचर समेत हुनसक्छ ।

ञ. सूचनाको वर्गीकरण र संरक्षण

सार्वजनिक निकायमा रहेको सूचनाको संरक्षण गर्नका लागि नीतिगत रुपमा सूचनाको वर्गीकरण गर्नु पर्ने कानूनी व्यवस्था रहेकोछ । सूचनाको वर्गीकरण गर्न एक समिति रहनेछ :

क) मुख्य सचिव, नेपाल सरकार - अध्यक्ष

ख) सचिव, समबन्धित कार्यालय - सदस्य

ग) कार्यालय प्रमुख वा अध्यक्षज्यूले तोकेको सम्बन्धित निकायको विशेषज्ञ - सदस्य

सूचनाको संरक्षण ५ वर्षदेखि बढीमा ३० वर्षसम्म राख्नु पर्नेछ । कुनै सूचना गोप्य राखी वर्गीकरण गर्नु पर्ने भएमा कारण र आधार खुलाउनु पर्छ । सूचना वर्गीकरण भएपछि त्यसको जानकारी राष्ट्रिय सूचना आयोगलाई दिनुपर्छ । व्यक्तिगत प्रकृतिको सूचना, प्रकाशन र प्रसारण गर्न नहुने र व्यक्तिगत सूचना सम्बन्धित व्यक्तिको लिखित सहमति विना प्रयोग गर्न नहुने व्यवस्था छ :

सार्वजनिक निकायमा कुनै व्यक्तिले जुन प्रयोजनका लागि सूचना प्राप्त गरेको हो सोही प्रयोजनमा मात्र गर्न पर्छ । सूचना अन्यत्र प्रयोग गरी दुरुपयोग गरेमा सार्वजनिक निकायले ३५ दिन भित्र राष्ट्रिय सूचना आयोग समक्ष उजुरी दिन सक्नेछ ।

ट. सजाय तथा क्षतिपूर्तिको व्यवस्था

सार्वजनिक निकायमा प्रमुख वा सूचना अधिकारीले सूचना नदिए वा दिन इन्कार गरे वा आंशिक रुपमा वा गलत सूचना दिएको वा सूचना नष्ट गरेको देखिएमा राष्ट्रिय सूचना आयोगले त्यस्तो प्रमुख वा सूचना अधिकारीलाई रु.१,०००/- देखि रु.२५,०००/- सम्म जरिवाना हुने । त्यस्तो प्रमुख वा सूचना अधिकारी विभागीय कारवाही हुने पदमा भए भिागीय सजायको लागि सम्बन्धित

निकायमा लेखी पठाउनेछ। विभागीय कारवाही ३ महिना भित्र गरी सोको जानकारी राष्ट्रिय सूचना आयोगलाई दिनु पर्छ। सार्वजनिक निकायका प्रमुख वा सूचना अधिकीले समयमा दिनु पर्ने सूचना दिन ढिलाई गरेमा जति दिन ढिलाई गरेको हो प्रतिदिन रु. ३००/- का दरले जरिवाना हुनेछ।

सूचना जुन प्रयोजनका लागि प्राप्त गरेको हो सो सूचना सोही प्रयोजनमा प्रयोग नगरी दुरुपयोग गरेमा त्यसले व्यक्तिलाई रु. ५,०००/- देखि रु.२५,०००/- सम्म जरिवाना राष्ट्रिय सूचना आयोगले गर्न सक्छ। राष्ट्रिय सूचना आयोगले दिएको निर्णय वा आदेश पालना नगर्ने व्यक्तिलाई रु. १०,०००/- सम्म जरिवाना हुन सक्नेछ। सूचना नदिएको कारण कुनै व्यक्तिलाई हानि-नोक्सानी भएमा ३ महिनाभित्र क्षतिपूर्तिको लागि राष्ट्रिय सूचना आयोग समक्ष क्षतिपूर्तिको लागि निवेदन दिन सक्नेछ। राष्ट्रिय सूचना आयोगमा निवेदन परेमा अवस्थामा व्यक्तिगत हानि-नोक्सानी भएको देखिएमा मनासिव माफिकको क्षतिपूर्ति सम्बन्धित निकायबाट भराई दिन सकनेछ।

ठ. सूचनादाताको संरक्षण

सार्वजनिक निकायका प्रमुख वा सूचना अधिकारीले सूचना प्रवाह गर्ने सम्बन्धमा असल नियतले गरेको काम कारवाही सम्बन्धमा कुनै मुद्दा चलाइने वा सजाय हुने छैन।

त्यस्तै सार्वजनिक निकायमा भएको वा भइरहेको वा हुन सकने भ्रष्टाचार अनियमितता प्रचलित कानून बमोजिम अपराध मानिने कुनै कार्यको सूचना दिनु कर्मचारीको दायित्व हुने। यस्तो सूचना दिनेलाई कुनै सजाय वा हानि-नोक्सानी पुऱ्याइने छैन।

ड. प्राधिकरणको सूचना प्रवाह सम्बन्धमा

नेपाल नागरिक उड्डयन प्राधिकरणसँग सम्बन्धित प्रवाह गर्न मिल्ने सूचना/जानकारी सरोकारवाला मागकर्ता कुनै पनि व्यक्ति, संस्था, पत्रकार, Media Group लाई सरल, सहज र तोकिएको समयावधिमा लिखित/मौखिक रुपमा उपललब्ध गराउने व्यवस्था गरिएको छ। प्राधिकरणबाट भए गरेका गतिविधि र क्रियाकलापहरु चौमासिक रुपमा CAAN NEWS प्रकाशन गरी सूचना प्रवाह गर्ने गरिएको छ। प्राधिकरणबाट प्रवाह गर्न मिल्ने र प्रवाह गर्न नमिल्ने सूचनाको वर्गीकरण नहुँदा सरोकारवाला सूचना मागकर्तालाई सूचना प्रवाह गर्न केही बढी समय लागे तापनि सूचना उपलब्ध गराउने गरिएको छ। प्राधिकरणबाट प्रवाह गर्न मिल्ने र प्रवाह गर्न नमिल्ने सूचनाको वर्गिकरण गर्ने कार्यप्रक्रिया अगाडि सकेको हुँदा आगामी दिनमा अहिले देखिएको समस्या समेत हल हुनेछ।

अन्त्यमा सूचनाको हक सम्बन्धी ऐन, २०६४ आउनुपूर्व जोसँग प्रशस्त धन र सैन्य शक्ति हुन्छ उसलाई सर्वशक्तिमान मानिन्थ्यो। तर हिजोआज जुन व्यक्तिसँग प्रशस्त सूचना, जानकारी र तथ्याङ्क हुन्छ उसैलाई धनी र शक्तिशाली मान्ने परम्परा बसेको छ। सूचनाको हक प्रभावकारी रुपमा कार्यान्वयन हुन तीन पक्षलाई महत्वपूर्ण अंगको रुपमा लिन सकिन्छ।

पहिलो : सूचना मागकर्ता, जसलाई संविधान र कानूनले सार्वजनिक संकायबाट सूचना माग गर्ने र प्राप्त गर्ने सर्वशक्तिमान तुल्याएको छ।

दोस्रो : सार्वजनिक निकायमा प्रमुख वा सूचना अधिकारी जसले आफ्नो निकायको सूचना आमनागरिक समक्ष सरल, सजिलो र प्रभावकारी रुपमा सूचना प्रवाह गर्ने संवैधानिक र कानूनी व्यवस्था छ।

तेस्रो : राष्ट्रिय सूचना आयोग जसले सूचना मागकर्ताले माग गरेको सूचना सार्वजनिक निकायले तोकिएको समयमा उपलब्ध नगराएको अवस्था संवैधानिक कानूनी उपचार गरी मागकर्ताको आवश्यकता पूर्ति गर्दछ। साथै राष्ट्रिय सूचना आयोगले आम नागरिकको सूचनाको संरक्षण, संवर्द्धन, प्रबर्द्धन र प्रचलन गरी गर्ने महत्वपूर्ण दायित्व निर्वाह गरी आमनागरिकको सूचनाको हकमा सुसूचित हुने अधिकारको उल्लेखनीय रुपमा भूमिका निर्वाह गर्दछ।

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Challenges of Safety Management in Aviation

Concept of Safety

Simply, safety is freedom from danger, risk or threat of harm or injury to person and damage to aircraft and property but airport operation or aircraft operation is not free from hazard or risk due to the nature and complexities of operation. At the airport there are many hazards such as person, vehicle, fuel, foreign object debris (FOD), runway surface conditions, birds and wildlife activities, the aircraft itself and its components. In fact, no human activity or human-made system can be absolutely free from hazard and operational errors. Hence, controlled risks and controlled errors are accepted in aviation industry to maintain the highest level of safety and efficiency. ICAO defines safety as follows:

Safety is the "state in which the possibility of harm to persons or of property damage is reduced to, and maintained at or below, an acceptable level through a continuing process of hazard identification and safety risk management."

Safety Management

Safety management is an organizational function which ensures that all safety risks have been identified, assessed and satisfactorily mitigated. The objective of safety management in the aviation industry is to prevent human injury or loss of life and to avoid damage to the environment and property. ICAO defines 'Safety management' as, *a systematic approach to managing safety, including the necessary organizational structures, accountabilities, policies and procedures.* In order to maintain the highest level of safety in the aviation industry collaboration between the state and the service providers has been given the highest priority. To manage safety in aviation ICAO has prescribed separate safety management framework for both the service providers and the regulator.

SSP and SMS

As per the standards and recommended practices (SARPs) contained in ICAO Annex 19, states are responsible to establish State Safety Program (SSP) and conduct safety oversight functions whereas the service providers are required by the State to establish and maintain Safety Management Systems (SMS) appropriate to the complexities of their aviation activities. Both SSP and SMS are established on four pillars termed as the components. The four components of SSP are State Safety Policy and Objectives, State Safety Risk Management, State Safety Assurance and State Safety Promotion. Similarly, the four components of SMS are Safety Policy and Objectives, Safety Risk Management, Safety Assurance and Safety Promotion.

The ultimate aim of safety management in aviation is to ensure safe operation of each activity by controlling the errors or failures and reducing the unwanted situations to the minimum. By establishing SMS, the service provider or operator defines its policy and commitment for safety, delegates authority for resource allocation, clearly defines safety responsibilities, trains personnel to identify and manage safety risks, ensures safe operation and maintenance, and promotes the safety activities. The safety accountability is delivered by personnel responsible for the day to day operational activities. With the clear organizational structures, policies and procedures, all possible attempt is made to avoid errors and failures to maintain safe operation every time. Similarly, the regulator (State) conducts safety oversight functions from the time of licensing till operation or service delivery through its mechanism. The State conducts inspection, audits and assessment to find out shortcomings and areas for improvement, investigate incidents and accidents to find out the causes to avoid repetition of similar occurrences, and enhance safety.

Challenges in Safety Management

The regulator and the operators or service providers collaborate for safe aviation activities through the ICAO safety management framework, i.e. SSP and SMS, and the State continuously conducts safety oversight function still incidents and accidents occur. Accidents and serious incidents very rarely happen

but minor incidents or unwanted situations arises frequently that raise question on the approaches for safety management. Why the regulations, management commitment or 'safety first' policy and the knowledgeable, trained and skilled personnel fail to ensure safety all the times? We often get the answer that human is fallible (like machine) and commits error, systems may fail and the environmental factors are not in our control. The ready-made answers for safety breakdown are not sufficient to convince the stakeholders and mainly those who lose not only their near and dear one but their own lives and everything.

Myths about Safety Management

In the best of all possible worlds, safety is managed by highly trained and rationale people using carefully selected indicators and effective methods. In reality, safety management is usually a collection of best practices based on a number of assumptions that are taken for granted, hence rarely discussed. Examples include the traditional dictum of 'safety first', the belief that increasing protection will increase safety, or the notion that most accidents are caused by human error. These and other assumptions are common to many (if not all) industrial sectors and determine individual attitudes, corporate policies and regulatory practices. Since these assumptions express common beliefs rather than facts, they are not verifiable and can therefore be considered as myths. [1]

Besnard and Hollnagel, in their working paper considered following six major safety myths and tried to challenge them on the basis of alternative views:

- ✔ Human error is the largest single cause of accidents and incidents.
- ✔ Systems will be safe if people comply with the procedures they have been given.
- ✔ Safety can be improved by barriers and protection; increasing the layers of protection leads to higher safety.
- ✔ Root cause analysis can identify why mishaps happen in complex socio-technical systems.
- ✔ Accident investigation is the logical and rational identification of causes based on facts.
- ✔ Safety always has the highest priority and will never be compromised.

These assumptions are the foundations of safety management in aviation as well as in other industries. It is assumed that going against these facts will result in unwanted events or degrade the level of safety. But these are not verified taking into consideration the alternative views such as why human who perform well most of the time can commit error sometimes. Similarly, can comply with procedures all the time or is safety level improves with barrier and protection only. Whether knowing root causes is sufficient to stop similar events of investigations are conducted without biasness. And keeping safety on top priority only cannot stop safety tradeoff in the industry or ground flights of the operator compromising safety.

Alternative views

Thus, Besnard and Hollnagel propose the following alternative views for safety management:

- ✔ 'Human error' is an artifact of a traditional engineering view, which treats humans as if they were (fallible) machines and overlooks how performance adjustments are used to match the working conditions.
- ✔ Actual working situations usually differ from what the procedures assume and strict compliance may be detrimental to both safety and efficiency. Procedures should be used carefully and intelligently.
- ✔ Technology is not value neutral. Additional protection changes behavior so that the intended safety improvements might not be obtained.
- ✔ Human performance cannot be described as if it was bimodal. In socio-technical systems, things that go wrong happen in the same way as things that go right.
- ✔ Accident investigation is a social process, where causes are constructed rather than found.
- ✔ Safety will be as high as affordable—from a financial and ethical perspective.

Conclusion

Considering the paradigm shift in aviation industries, it is high time to discuss on assumptions of safety management and the alternative views to ensure safe operation and service delivery. Instead of relating safety with unwanted events and assuming human as fallible, focus should be given on safe performance and making human more intelligent and capable to handle bad situations as well. Then only we can reduce the unwanted events to zero.

1 D. Besnard and E. Hollnagel, "Believe some myths about safety management", 2014

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नेपाल नागरिक उड्डयन प्राधिकरणमा कर्मचारीहरूको बढुवा व्यवस्था

नेपाल नागरिक उड्डयन प्राधिकरण तत्कालिन हवाई विभागको रुपान्तरित संस्था हो । यसको मुख्य उदेश्य नागरिक उड्यन क्षेत्रलाई नियमन गर्ने कार्यको साथै उडान सम्बन्धी सञ्चार सेवा प्रदान गर्ने, पथ प्रदर्शन गर्ने, एयर नेभिगेशन सेवा प्रदान गर्ने पनि हो । यसको लागि हाल प्राधिकरणमा प्रशासन तथा प्राविधिक सेवाका गरी कूल १०६५ जनको दरवन्दी रहेको छ, जुन संख्या तत्कालिन हवाई विभागबाट प्राधिकरणमा रुपान्तरित हुदा नै कायम भएको संख्या हो ।

बढुवाको अर्थ:

बढुवा कर्मचारीहरुको लागि महत्वको विषय हो । यो उनीहरुले सम्पादन गरेको कामको मूल्याङ्कनको दृश्यात्मक पाटो पनि हो । यसमा पदीय हैसियत तथा जिम्मेवारी थप हुनुको साथै प्रतिष्ठा समेत जोडिएको हुन्छ । त्यसैले यो कार्यरत कर्मचारीहरुको मनोवल अभिवृद्धि गर्ने औजार पनि हो । कर्मचारीहरुमा बढुवा पाउने चाहनाको मात्रा समय, औकात, अवस्था र परिवेशअनुसार केही घटबढ अवश्य हुन्छ । यसको उचित व्यवस्थापन गरी कार्यालयले सबैलाई उसको क्षमता, लगन, दक्षता र उसले सम्पादन गरेको कामको आधारमा केही न केही तहसम्म बढुवा पाउने गरी अवसर खुल्ला गरिदिनुपर्छ । यसो भएन र वृत्ति विकासको ढोका वन्द भयो भने त्यसले कर्मचारीमा निरासा पैदा गर्छ, जसबाट उसको मनोवल खस्किनुको साथै कार्य सम्पादन स्तरमा पनि गिरावट आउँछ ।

सार्वजनिक निकायले कर्मचारी बढुवा गर्दा विवेकको आधारमा नभई एउटा निश्चित प्रक्रिया अवलम्बन गर्नुपर्ने हुन्छ, जसबाट आउने परिणाम जे हुन्छ त्यसलाई सर्वस्वीकार्य मानिन्छ । त्यसैले बढुवाको लागि अपनाइने प्रक्रिया निश्पक्ष, विश्वासनीय र भरपर्दो हुन आवश्यक हुन्छ ।

प्राधिकरणमा बढुवाको संरचनागत व्यवस्था:

प्राधिकरणमा कर्मचारीहरुको नियुक्ति तथा बढुवा गर्ने प्रयोजनको लागि कर्मचारीहरुको सेवाका शर्त र सुविधा सम्बन्धी नियमावलीमा नै पदपूर्ति समितिको व्यवस्था गरिएको छ । विगतमा पदपूर्ति समितिबाटै लिखित परीक्षा लिई नतिजा समेत प्रकाशन गर्ने गरेको सन्दर्भमा अन्तर्वार्ता लिने प्रयोजनको लागि लिखित परीक्षाको अंक थाहा नभएको र अन्तर्वार्तामा को को रहन्छन् भन्ने पहिले नै थाहा नभएको पदाधिकारीहरुको व्यवस्था गनुपर्ने महशुश गरी पदपूर्ति समितिमा नभएका छुट्टै व्यक्तिहरु सम्मिलित अन्तर्वार्ता समितिको व्यवस्था गरिनुको साथै पदपूर्ति समिति र अन्तर्वार्ता समितिमा लोक सेवा आयोगको समेत प्रतिनिधि रहने व्यवस्था गरिएको छ ।

कर्मचारीको अनुभव:

प्राधिकरण स्थापना भएपछि पनि कर्मचारीहरुको वृत्ति विकासको अवसरलाई निरन्तरता दिनुपर्ने भएकोले कर्मचारीहरुको सेवाका शर्त र सुविधा सम्बन्धी नियमावलीमा पदपूर्ति समितिको व्यवस्था गरी बढुवा सम्बन्धी कार्यलाई निरन्तरता दिइएको थियो । तथापि विगतमा लोक सेवा आयोगले गर्दे आएको कार्यलाई समेत समेटेर बढुवा प्रक्रियालाई अघि बढाउनुपर्ने भएकोले थप भएको नया जिम्मेवारी समेत पूरा गर्नुपर्दा अनुभवको कमिको कारण अपेक्षाकृत रुपमा गति लिन नसकेको गुनासो कर्मचारी वृत्तमा नभएको भने होइन । अनुभवले आवश्यकताको जन्म दिन्छ भन्ने मान्यता अनुसार निश्पक्षताको विश्वास अभिवृद्धि गर्न छुट्टै अन्तर्वार्ता समितिको व्यवस्था पनि कर्मचारीहरुकै पहलबाट भएको हो ।

प्राधिकरण गठन भएपछिको यो २० वर्षको अवधिमा कर्मचारीहरुको दरवन्दी संख्या थप भएको छैन । तथापि बढुवाको सन्दर्भमा भने विद्यमान् संरचनामा भने धेरै फरक आइसकेको छ । प्राधिकरणको प्रारम्भिक अवस्थामा हालको तहबाट माथिल्लो पदमा बढुवा पाउन अत्यन्त कठिन थियो । उच्च तहका पदहरु ज्यादै कम थिए भने तल्ला तहका पदहरु धेरै हुनुको साथै दरवन्दी बाहिर पनि स्वतः सिर्जित पद कायम गरी धेरै संख्यामा कर्मचारीहरुलाई राखिएको थियो । तत्कालिन हवाई विभागको निजामति सेवाबाट प्राधिकरणको सेवामा कर्मचारीहरुलाई परिणत गर्दा श्रेणिगत व्यवस्थाबाट तहगत व्यवस्थामा जानुपर्ने भएको र पद मिलान गर्दा तह ७, ९, र ११ मा पद खाली राखी मिलान भएकोले एक पुस्ताका कर्मचारीलाई उक्त खाली पदमा बढुवा हुन एक हदसम्म सहजता देखिए पनि अधिकाँश कर्मचारीहरुले लामो समयसम्म बढुवाको अवसर प्राप्त गर्न सकेका थिएनन् । जसको कारण कर्मचारीहरुको उत्साह क्रमशः घट्दै

गएकोले कर्मचारीहरुको चाहना बमोजिम निश्चित अवधिसम्म एउटै सेवामा रही कार्य गरी बढुवाको अवसर नपाएका कर्मचारीहरुलाई दरवन्दीमा व्यवस्था नभए पनि विशेष पद श्रृजना गरी एक तह वृद्धि गरिदिने व्यवस्था गरियो । यसबाट धेरै कर्मचारीहरुले एकैपटक बढुवा पाई राहतको महशुश गरे । पछि यस व्यवस्थालाई अझ फराकिलो बनाउदै जाँदा र धेरै कर्मचारीहरु यस प्रक्रियाबाट बढुवा हुदै जाँदा दरवन्दीको मर्म मर्न थाल्यो । साथै, दरवन्दीमा रहेका र विशेष पदमा रहेका समान तहका कर्मचारीहरुबीच अधिकारको विषयमा विवाद हुन थाल्यो । यही परिवेशमा हाल निजामति सेवामा रहेको यस्तै प्रकारको व्यवस्था खारेज भैसकेको छ ।

वर्तमान सन्दर्भ:

गणतन्त्रको स्थापना पश्चात संविधान सभाबाट जारी संविधानमा निजामति कर्मचारीहरुका अतिरिक्त नेपाली सेना, नेपाल प्रहरी, सशस्त्र प्रहरी बल, र अन्य संघीय सरकारी सेवाको पदमा लिइने लिखित परीक्षा लोक सेवा आयोगबाट सञ्चालन हुने व्यवस्था भएकाले अब लोक सेवा आयोगको भूमिका संवैधानिक आधारमा फराकिलो हुन गएको छ । यसरी थप भएको कार्य सम्पादन गर्नको लागि आयोगमा सुरक्षा निकाय तथा संगठित संस्था महाशाखाको गठन भई कार्य भईरहेको छ । यसका साथै आयोगले यी निकायहरुमा हुने नियुक्ति, बढुवा र विभागीय कारवाहीका विषयहरुमा सकेसम्म एकरुपता ल्याउने प्रयास गर्नुको साथै आयोगको सामान्य सिद्धान्तको परिधिभित्र समेट्ने प्रयास गरिरहेको छ । यसको लागि यस प्राधिकरण लगायत सबै निकायहरुले आ आफ्नो निकायको कर्मचारी नियमावलीहरुमा सुधार गरी आयोगको स्वीकृति लिई अघि बढ्ने क्रममा रहेका छन् ।

प्राधिकरणमा बढुवाको कानूनी आधार र बढुवाको किसिम:

नेपाल नागरिक उड्डयन प्राधिकरण, कर्मचारीहरुको सेवाका शर्त र सुविधा सम्बन्धी नियमावली २०५६ मा तह ४ देखि ११ सम्मको पदमा बढुवा प्रयोजनको लागि रिक्त दरवन्दीबाट प्रतिशत निर्धारण गरी तोकिएको प्रतिशतमा देहाय बमोजिम २ किसिमले बढुवा गर्ने व्यवस्था गरिएको छ ।

१) आन्तरिक प्रतियोगितात्मक परीक्षा

२) कार्यक्षमताको आधार वा फायल बढुवा

आन्तरिक प्रतियोगितात्मक परीक्षा तह ६ देखि तह ११ सम्म मात्र छ । यसको लागि सम्बन्धित सेवा, समूह वा उप समूह भित्रका ३ वर्ष सेवा अवधि पुगेका कर्मचारीहरुबीच प्रतिस्पर्धा गराई योग्य ठहरिएका उम्मेद्वारलाई बढुवा गरिन्छ । त्यसैगरी सहायक चौथो तहदेखि अधिकृत बाह्रौं तहसम्म कार्य क्षमताको आधारमा बढुवा गर्दा देहाय बमोजिम तोकएको शैक्षिक योग्यता प्राप्त गरेका कर्मचारीहरुमध्ये देहाय बमोजिम ज्येष्ठता, कार्य सम्पादन स्तर, शैक्षिक योग्यता, तालिम र तोकिएको भौगोलिक क्षेत्रमा रही कार्य गरेको आधारमा प्राप्त हुने अंक मध्ये सबैभन्दा बढी अंक प्राप्त गर्ने उम्मेद्वारलाई बढुवा गर्ने व्यवस्था छ । यसरी बढुवा गर्दा बाह्रौं तह बाहेक अन्य तहका पदहरुमा देहाय बमोजिम अंक गणना गरी सबैभन्दा बढी अंक प्राप्त गर्ने कर्मचारीहरुलाई क्रमशः बढुवा गर्ने व्यवस्था छ ।

(क)	जेष्ठता वापत अधिकत्तम	- २५ अंक सम्म
(ख)	शैक्षिक योग्यता वापत अधिकत्तम	- २० अंक सम्म
(ग)	तालिम वापत अधिकत्तम	- ३ अंक सम्म
(घ)	भौगोलिक क्षेत्रमा काम गरे वापत अधिकत्तम	- १२ अंक सम्म
(ङ)	कार्य सम्पादन मूल्यांङ्कन वापत अधिकत्तम	- ४० अंक सम्म
		**जम्मा १००

तह १२ को पदमा भने कार्य क्षमताको आधारमा बढुवा गर्दा पदपूर्ति समितिले रिक्त पदको उपलब्ध भएसम्म तेव्वर संख्यामा सम्भाव्य उम्मेद्वारहरुको नाम सिफारिस गर्दछ । यसरी सिफारिसमा परेका तह ११ का कर्मचारीहरुमध्येबाट प्राधिकरण सञ्चालक समितिले नेतृत्व गर्न सक्ने क्षमता र कार्य कुशलताको आधारमा उपयुक्त ठहऱ्याएको उम्मेद्वारलाई वढुवा गर्ने व्यवस्था छ । तह २ र ३ को लागि आन्तरिक प्रतियोगितात्मक परीक्षा वा कार्य क्षमताको आधारमा बढुवा गर्ने व्यवस्था रहेको छैन । यस्तो पदमा बढुवाको लागि विशेष पद श्रृजना गरी तोकिएको सेवा अवधि र शैक्षिक योग्यता पूरा गरेका कर्मचारीहरुलाई बढुवा दिने व्यवस्था राखिएको छ । तर वर्तमान् सन्दर्भमा लोक सेवा आयोगले सबै खालका विशेष बढुवाको प्रावधान खारेज गर्न लागेको हुदा यसको लागि अलग्गै व्यवस्था गर्नुपर्ने आवश्यकता रहेको देखिन्छ।

बढुवा कर्मचारीहरु सबैको चाहनाको विषय हो । त्यसैले धेर थोर जे जति भएपनि सबैले बढुवाको अवसर पाउनुपर्छ । सम्बन्धित सेवा समूह र उप समूहमा रहेका कर्मचारीहरुको संख्याले बढुवाको अवसरलाई सीमित गर्दछ । यस प्राधिकरणमा प्रशासन सेवा र प्राविधिक सेवाका विभिन्न समूह तथा उप समूह अन्तर्गत रहेका पदहरुको दरवन्दी संख्याको ठूलो भिन्नताले बढुवाको सम्भावनालाई समान अवसर प्रदान गरेको छैन । अझ कतिपय सेवा समूहका पदहरुमा माथिल्लो तहको दरवन्दी नै छैन । यस्तो अवस्थामा बढुवाको लागि अवसर नपाएका सम्बन्धित सेवा समूहका कर्मचारीहरुलाई प्राधिकरणमा रहेको दरवन्दीको कार्य विवरण हेरी कुनै विशिष्ट ज्ञानको आवश्यक नपर्ने पदहरुमा मिश्रित पद सिर्जना गरी वृत्ति विकासको ढोका फराकिलो पार्ने प्रयास गरिएको छ ।

कार्यक्षमताको अंक भार र प्राप्तांक गणना गर्ने आधार :

कार्यक्षमताको लागि अंक गणना गर्दा देहाय ताकिएको अंकभारको आधारमा कर्मचारीले प्राप्त गरेको अंकको गणना गरिन्छ

जेष्ठताको लागि	अंक २५ सम्म	प्रत्येक वर्ष अंक २.५ का दरले **यसमा रहेको थप व्यवस्था** १) गयल भएको तथा असाधारण विदामा वसेको अवधिको लागि ज्येष्ठता वापत अंक नदिइने व्यवस्था रहेको । २) चानचुन महिना वा दिनको निमित्त दामासाहीको हिसावले अंक दिने व्यवस्था रहेको ।
शैक्षिक योग्यताको लागि	अंक २० सम्म	१) न्यूनत्तम शैक्षिक योग्यताको लागि अंक १६ २) माथिल्लो शैक्षिक योग्यताको लागि अंक ४
तालिमको लागि	अंक ३ सम्म	१) प्रथम श्रेणिको लागि अंक ३ २) द्वितीय श्रेणिको लागि अंक २.५ ३) तृतीय श्रेणिको लागि अंक २ **यसमा रहेको थप व्यवस्था** १) श्रेणी नखुलेको शैक्षिक योग्यता तथा तालीम वापत द्वितीय श्रेणी वरावरको अंक दिइने व्यवस्था रहेको । २) तालीमको अंक दिंदा एक महीना वा सो भन्दा वढी अवधिको सेवासंग सम्वन्धित विषयको सेवाकालीन तालीम वापत अंक दिइने व्यवस्था रहेको ३) तालीमको अंक गणना गर्दा जुन तहमा छंदा तालीमको लागि मनोनयन भएको हो, सो अंक सोही तहको लागि मात्र गणना गरिने व्यवस्था रहेको ।
भौगोलिक क्षेत्रमा काम गरे वापत	अंक १२ सम्म	१) क वर्गको क्षेत्रमा काम गरेवापत प्रतिवर्ष अंक २.०० २) ख वर्गको क्षेत्रमा काम गरेवापत प्रतिवर्ष अंक १.७५ ३) ग वर्गको क्षेत्रमा काम गरेवापत प्रतिवर्ष अंक १.५० ४) घ वर्गको क्षेत्रमा काम गरेवापत प्रतिवर्ष अंक १.२५ **यसमा रहेको थप व्यवस्था** १) रुजु हाजिरको आधारमा अंक गणना गरिने व्यवस्था रहेको । २) कुनैपनि भौगोलीक क्षेत्रमा २३३ दिन रुजु हाजिर भई सेवा गरेमा मात्र भौगोलिक क्षेत्रको अंक दिने व्यवस्था रहेको । ३) चानचुन महिना वा दिनको निमित्त दामासाहीको हिसावले अंक दिने व्यवस्था रहेको । ४) भौगोलीक क्षेत्रमा काम गरे वापत पाउने अंक बहाल रहेको तहमा प्राप्त गरेको भए मात्र पाउने व्यवस्था रहेको । ५) असाधारण विदामा वसेको अवधिको भौगोलीक क्षेत्र वापतको अंक गणना नगरिने व्यवस्था रहेको । ६) विदेशमा ३० दिन भन्दा बढी अवधि तालिम लिएमा जुनसुकै भोगोलिक क्षेत्रमा रहेको भएपनि सो अवधिको लागि घ वर्गको हिसावले पाउने अंकको आधा मात्र पाउने व्यवस्था रहेको ।
कार्य सम्पादन मूल्यांङ्कन वापत	अंक ४० सम्म	१) सुपरिवेक्षकले अधिकत्तम २५ अंक सम्म २) पुनरावलोकन कर्ताले अधिकत्तम १० अंक सम्म ३) पुनरावलोकन समितिले अधिकत्तम ५ अंक सम्म **यसमा रहेको थप व्यवस्था** १) असाधारण विदामा वसेको अवधिलाई कटाएर मात्रै सम्भाव्य उम्मेद्वारको अंक गणना गरिने व्यवस्था रहेको । २) तोकिएको म्याद नाघेपछि दर्ता भएको कार्यसम्पादन मूल्यांकन वापत सोही वर्ष प्राप्त गरेको प्राप्तांकबाट पदपूर्ति समितिले पाँच अंक घटाउने व्यवस्था रहेको । ३) बढुवा प्रयोजनको लागि पछिल्लो ३ वर्षको मात्र कार्य सम्पादन मूल्यांङ्कन वापतको अंक गणना गरिने र यसरी अंक गणना गर्दा ३ वर्षको कूल प्राप्ताङ्कको औषत निकालिने व्यवस्था रहेको ।

अन्य व्यवस्था

१) बढुवाको लागि रिक्त पदको गणना गर्दा गत आर्थिक वर्षसम्म रिक्त भएको पदहरुको मात्र गणना गर्ने गरिएकोमा नियमावलीको १५ औं संशोधनमा आगामी पौष मसान्तसम्म अनिवार्य अवकास भई रिक्त हुन सक्ने पदहरु समेतको गणना गरी सो समेतको विज्ञापन पहिलेनै गर्ने व्यवस्था गरिएको थियो । हाल आएर लोक सेवा आयोगको प्रचलन अनुसार यसलाई अझ फराकिलो बनाई आगामी आषाढ महिनासम्म अनिवार्य अवकास भई रिक्त हुन सक्ने पदहरु समेतको गणना गरी सो समेतको विज्ञापन पहिलेनै गर्ने गरिएको छ ।

२) बढुवामा सम्भाव्य उम्मेदवार हुनको लागि बढुवा हुने पदको सेवा, समूह र उपसमुहको एकतह मुनिको पदमा कम्तिमा तीन वर्ष स्थायी सेवा अवधि पूरा भएको र अनुसूची-६ बमोजिमको न्यूनतम शैक्षिक योग्यता प्राप्त गरेको हुनु पर्ने व्यवस्था रहेको ।

३) सेवा/समूहीकृत नहुने वा मिश्रित सेवा समूह भएका सबै तहका पदहरुमा कार्यक्षमताको आधारमा बढुवाको माध्यमबाट पदपूर्ति गरिने व्यवस्था रहेको ।

४) सेवा, समूह वा उपसमूह परिवर्तन भएका कर्मचारीहरूले साविकको सेवा, समूह वा उपसमूहको समान तहको पदमा गरेको सेवा अवधि बढुवाको प्रयोजनको लागि समेत गणना गरिने व्यवस्था रहेको ।

५) बढुवाको लागि अंक प्रदान गर्ने प्रावधान रहेका उपनियमहरुमा कुनै संशोधन गर्दा त्यस्तो संशोधन भएको एक वर्ष पछिको मितिदेखि मात्र लागू हुने व्यवस्था रहेको ।

६) बढुवाको नामावली प्रकाशन गर्दा वढुवा हुने उम्मेद्वारले पाएको कुल अंक समेत प्रकाशन गर्नु पर्ने र त्यसरी वढुवा सिफारिशको नामावली प्रकाशन भएपछि वढुवामा नपर्ने कुनै उम्मेद्वारले आफुले पाएको कार्यसम्पादन मूल्यांकन सहितको जम्मा अंकको जानकारी लिन चाहेमा त्यसको जानकारी दिनु पर्ने व्यवस्था रहेको ।

७) वढुवा सिफारिश उपर चित्त नवुझी उजूरी दिन चाहेमा वढुवा नामावली प्रकाशित भएको मितिले पैंतीस दिनभित्र आफूले वढुवा पाउनु पर्ने स्पष्ट आधार र कारण समेत खुलाई समितिले तोकेको वढुवा सिफारिश उजुरी समिति समक्ष उजुरी दिन सकिने व्यवस्था रहेको ।

८) प्रकाशित वढुवाको सिफारिश सूची उपर नियम ६.१० को उपनियम (१) बमोजिमको म्याद भित्र कसैको उजूरी नपरेमा त्यस्तो वढुवा सिफारिश सूची प्रकाशन भएको मितिले छत्तिसौं दिनदेखि र उजुरी परी बढुवाको सूचि संशोधन गर्नुपरेमा संशोधित रुपमा सूचना प्रकाशन गरेको दिनदेखि वढुवा मिति कायम हुने गरी सम्वन्धित कर्मचारीलाई वढुवा गरिने व्यवस्था रहेको ।

९) उजूरी आधारहीन ठहरिई पूर्व प्रकाशित बढुवाको सूचिमा कुनै फेरबदल गर्नु नपरेमा त्यस्तो उजुरीकर्ताको पछि हुने वढुवामा पहिलो पटकको उजूरी भए दुई अंक कट्टा गरिने र दोश्रो पटकको उजूरी भए तीन अंक काटिने व्यवस्था रहेको ।

१० बढुवाको लागि अंक गणना हुने तालिममा मनोनयन गर्दा सामान्यतया जेष्ठतालाई आधार लिईने व्यवस्था रहेको ।

बढुवा हुन नपाउने आधार : बढुवा पाउने अभिलाषा कर्मचारीको हुने भएपनि त्यो निःशर्त भने हुन सक्दैन । कर्मचारीले सम्पादन गरेको कामको आधारमा उसलाई थप जिम्मेवारी र प्रोत्साहन दिने वा नदिने भन्ने व्यवस्था मिलाउन आवश्यक हुन्छ । त्यसैले सन्तोषजनक कार्य नगर्ने, काम चोर र तोकिएको आचरण पालना नगर्ने कर्मचारीहरुलाई बढुवा प्रक्रियामा समावेश हुन नपाउने गरी संगठनले व्यवस्था गरेको हुन्छ । यही व्यवस्था अनुसार नेपाल नागरिक उड्डयन प्राधिकरण, कर्मचारीहरुको सेवाका शर्त र सुविधा सम्बन्धी नियमावली, २०५६ मा समेत यस्तो प्रावधान राखिएको छ । यसमा राजनैतिक प्रभाव पार्ने, सरकार तथा प्राधिकरणको आलोचना गर्ने, खटाईएको कार्यालय वा स्थानमा नजाने, सेवा सम्वन्धी विषयमा नकरात्मक समाचार लेख्ने, प्रदर्शन र हड्ताल गर्ने वा गर्न उक्साउने, हड्ताल, थुनछेक तथा घेराउ गर्ने, जथाभावी रुपले दान उपहार चन्दा स्वीकार गर्ने वा सापटी तथा आर्थिक लेनदेन गर्ने, राजनीतिमा भाग लिनने जस्ता आचरण विपरितका कार्य पटक पटक भएमा त्यसलाई कसूर मानी नसिहत दिने र २ पटकसम्म नसिहत पाइसकेको कर्मचारीले पुनः नसिहत पाउने कार्य गरेमा निजलाई २ वर्षसम्म बढुवा रोक्का गर्ने वा तीन तलव वृद्धि रोक्का गर्न सकिने व्यवस्था रहेको छ । स्मरणीय छ, ३ तलव वृद्धि रोक्का भनेको ३ वर्षसम्म ग्रेड नपाउने अवस्था हो भने यससंगै सो अवधिभर निजको बढुवा समेत हुदैन । त्यसैले यो आर्थिक वृद्धि रोक्नुको साथ साथै २ वर्षसम्म बढुवा रोक्काको सजाय भन्दा थप १ वर्षको अवधिसम्म बढुवा रोक्ने सजाय पनि हो ।

कर्मचारीले बढुवा नपाउने अर्को अवस्था भनेको निलम्बनको अवस्था पनि हो । अभियोग लागेको कर्मचारी छानविनको सिलसिलामा निलम्बनमा पर्नसक्ने र त्यस्तो अवस्थामा उ बढुवा प्रक्रियामा समावेश हुन पाउदैन । यो व्यवस्थाबाट उक्त कर्मचारी पछि निर्दोष साबित भएपनि बढुवा प्रक्रिया अघि बढीसकेको हुने भएकोले छुट्न जाने हुदा उसले बढुवा पाउने अवस्था रहदैन ।

बढुवा प्रक्रियाका दोषहरु :

१) **सम-न्यायिक अनुभूति दिलाउन नसक्नु :** विभिन्न सेवा, समूह, र उप समूहहरुमा रहेको दरवन्दी संख्याबीचको ठूलो अन्तरले कुनै सेवा समूह तथा उप समूहहरुमा बढुवाको लागि सम्भावित उम्मेद्वार

हुने बित्तिकै बढुवाको अवसर प्राप्त भइरहेको अवस्था छ भने कतिपय पदहरुमा त झन् तल्लो पदबाट सम्भावित उम्मेद्वार भई दरखास्त कहिले पर्ने हो भनी पर्खिबसेको झैं अवस्था समेत रहेको छ। अर्कोतिर कुनै सेवा समूह तथा उप समूहमा बढुवाको लागि वर्षौं कुर्नुपर्ने अवस्था छ। त्यसैगरी कतिपय सेवा समूह, उप समूहमा चाँहि बढुवाको लागि पद नै नरहेको अवस्था समेत विद्यमान् छ।

२) उचित पदमा उचित व्यक्तिको चयन हुन नसक्नु : प्राधिकरणमा रहेका कतिपय महत्वपूर्ण पदहरु निकै थोरै छन्। ती पदहरुमा बढुवा पाई काम गर्न आईपुग्ने कर्मचारीहरु एउटा निश्चित पद्धतिको नतिजाबाट चयन हुन्छन्। यसरी महत्वपूर्ण पद प्राप्त गर्ने सबै व्यक्तिहरु सो पदको लागि योग्य हुन्छन् नै भन्न सकिदैन, किन कि वैयक्तिक विभिन्नताको कारण कामको प्रकृति र व्यक्तिको स्वभाव सँधै मेल खाँदैन। यस्तो अवस्थामा स्वभाव मिल्ने अन्य व्यक्तिको खोजी गरी उचित व्यक्तिको चयन हुन सक्ने अवस्था छैन।

३) कामको सम्मान हुन नसक्नु : प्राधिकरणको कतिपय पदहरुमा बढुवा हुन जुनसुकै सेवा, समूह वा उपसमूहका कर्मचारीहरुबीच प्रतिस्पर्धा हुन सक्ने व्यवस्था छ। बढुवा पाउनको लागि कर्मचारीहरु यस्तो पदमा आवेदन भरी बढुवा त पाउँछन् तर सो पदमा काम गर्न भने हिच्किचाउँछन्। किन कि त्यो काम गर्दा अरुको नजरमा आफुलाई गिरेको महशुश गर्दछन्। खास गरी प्राविधिक सेवा समूहका कर्मचारीहरुले खुल्ला सेवा, समूह वा उपसमूहको यस्तो पदमा काम गर्न असहज महशुश गरिरहेको अवस्था छ।

४) प्राविधिक सेवामा बढुवा हुदै जाँदा उसको सेवाको विशिष्टता खस्किदै गई अन्तमा प्रशासक जस्तो हुन पुग्नु: वर्तमान् बढुवा प्रणालीको यो एउटा अत्यन्तै महत्वपूर्ण दोष हो। आफ्नो सेवा समूहको विशिष्टता कायम राखेर वा यसमा थप विशिष्टता प्राप्त हुने गरी प्राविधिक कर्मचारीहरुले बढुवा पाउने व्यवस्था वर्तमान्मा छैन। बढुवा पाउनको लागि उनीहरुले आफ्नो विशिष्टता गुमाउन तयार हुनैपर्छ। अर्थात् उनीहरु क्रमशः कर्मचारी व्यवस्थापन, आर्थिक प्रशासन हुदै सामान्य प्रशासनको काममा सर्दै जान्छन्। यसबाट आाफ्नो सेवा र अनुभवको आधारमा विशिष्टता तर्फ अझै खारिदै जानुपर्नेमा बढुवा हुदैं जाँदा उनीहरुको विशिष्टता भुत्ते हुदै जाने स्थिति छ। विश्व विद्यालयहरुमा उप प्राध्यापकबाट प्राध्यापकसम्म बढुवा हुने व्यवस्था, अस्पतालहरुमा डाक्टरहरु र नर्सहरुको बढुवा हुने व्यवस्था तथा न्यायलयहरुमा न्याधीशहरुको बढोत्तरी हुने व्यवस्थामा यो दोष रहेको छैन। प्राधिकरणले पनि अब विशिष्टताको आफ्नो पहिचानलाई बढावा दिने गरी बढुवा प्रणालीमा पुनरावलोकन गरी यस प्रकारको दोषबाट मुक्ति पाउन सके प्राधिकरणको कार्य सम्पादनमा थप सुधार हुने अपेक्षा गर्न सकिन्छ।

Visual Approach Slope Aids in airports of Nepal

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Visual approach slope aids are aeronautical ground lighting systems designed to provide a measure of vertical guidance (height information above ground) to aircraft approaching a particular runway. The principle of these aids is to provide color-based identification to the pilot indicating their variation from a desired altitude and descent rate while on approach. Visual approach slope aids are usually installed when one or more of the following conditions exist:

1) A runway is used by turbo jet aircraft.
2) The pilot may have difficulty in judging the final approach because of inadequate visual reference over water or featureless terrain, or because of deceptive surrounding terrain or misleading runway slopes.
3) There are serious hazards in the approach area that would endanger the aircraft if it sank below the normal approach path.
4) serious hazard would occur in the event of undershooting or overshooting.
5) Turbulence is found to exist because of terrain or meteorological conditions.

The two most common visual approach slope aids are the visual approach slope indicator system (VASIS), and the precision approach path indicator (PAPI).

Visual Approach Slope Indicator

The visual approach slope indicator (VASI) is a system of lights which acts as an aid in defining the desired glide path in relatively good weather conditions. VASI lighting intensities are designed to be visible from 3 to 5 mile during the day and up to 20 mile at night.

There are two different VASI configurations such as T- VASIS and AT- VASIS. T-VASIS consists of twenty light units symmetrically disposed about the runway centreline in the form of two wing bars of four light units each, with bisecting longitudinal lines of six lights, and an AT-VASIS consists of ten light units arranged on one side of the runway in the form of a single wing bar of four light units with a bisecting longitudinal line of six lights.

Precision Approach Path Indicator

There are two different precision approach path indicator (PAPI) configurations such as PAPI and A-PAPI. Precision approach path indicator (PAPI) is preferred than VASI system because it gives more precise indications to the pilot of the approach path of the aircraft and utilizes only one bar as opposed to the minimum of two required by the VASI system.

The PAPI system consists of a unit with four lights on either side of the approach runway. By utilizing the color scheme indicated on Figure:1, the pilot is able to ascertain five approach angles relative to the proper glide slope as compared with three with the VASI system. One of the problems with the VASI system has been the lack of an immediate transition from one color indication to another resulting in shades of colors. The PAPI system resolves this problem by providing an instant transition from one color indication to another as a reaction to the descent path of the aircraft. An advantage of the system is that it is a one-bar system as opposed to the two-bar VASI system. This results in greater operating and maintenance cost economies, and eliminates the need for the pilot to look at two bars to obtain glide slope indications.

Figure: 1 Pilot View of PAPI Light Signals at different elevations

The PAPI system consists of a bar of 4 sharp transition multi-lamp units, each one producing a light beam divided into an upper white and a lower red sector. PAPI's are usually situated to the left side of the runway. However, where this is impracticable, it may be installed on the right side of the runway. There also are aerodromes where PAPIs are placed on both sides of the runway. The visual range of PAPI system is more than 11km by day and 30km by night (meteorological visibility 14km). The angle of elevation (approach) settings of the light units in a PAPI wing bar will be such that, during an approach, the pilot maintaining sighting of one white and three reds will clear all obstacles in the approach area by a safe margin.

Where a PAPI is used together with an ILS, it is located

to align both glide slopes as much as practicable. A schematic diagram of the PAPI system is shown in Figure 2.

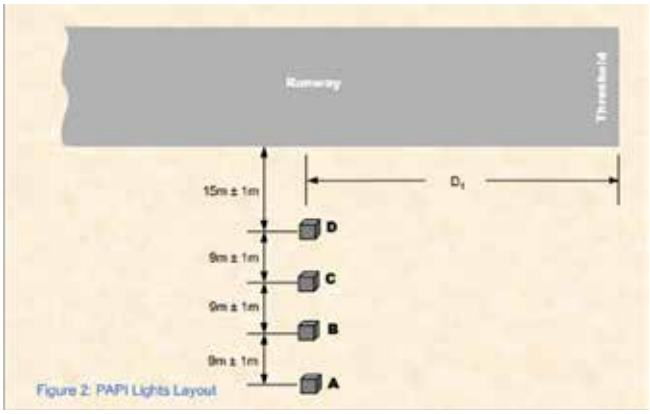

Figure: 2 PAPI Lights Layout

The wing bar of a PAPI is constructed and arranged in such a manner that a pilot making an approach will:

a) when on or close to the approach slope, see the two units nearest the runway as red and the two units farthest from the runway as white;

b) when above the approach slope, see the one unit nearest the runway as red and the three units farthest from the runway as white; and when further above the approach slope, see all the units as white; and

c) when below the approach slope, see the three units nearest the runway as red and the unit farthest from the runway as white; and when further below the approach slope, see all the units as red.

Abbreviated Precision Approach Path Indicator (APAPI)

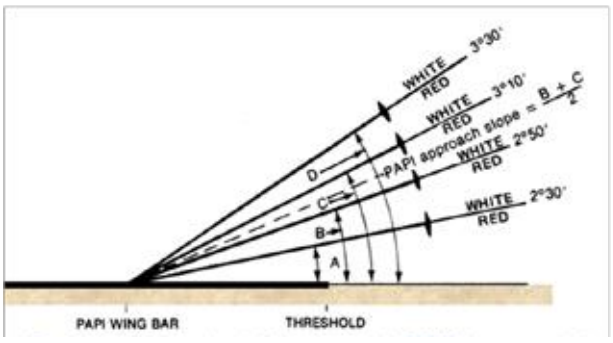

Figure: 3 Light beams and angle of elevation setting for PAPI 3 degree approach slope

The Abbreviated Precision Approach Path Indicator (APAPI) system consists of a bar of 2 sharp transition multi-lamp units, each one producing a light beam divided into an upper white and a lower red sector. The system is located on the left hand side of the runway as seen by the pilot of an approaching aeroplane unless it is physically impracticable to do so. On runways where no public jet aircraft is carried out an Abbreviated PAPI (APAPI) may be installed.

An APAPI consists of only 2 light units. A schematic diagram of the APAPI system is shown in Figure 4.

The wing bar of an APAPI is constructed and arranged in such a manner that a pilot making an approach will:

a) when on or close to the approach slope, see the unit nearer the runway as red and the unit farther from the runway as white;

b) when above the approach slope, see both the units as white; and

c) when below the approach slope, see both the units as red.

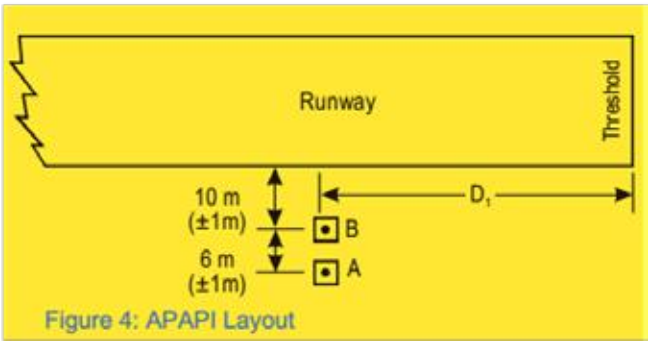

Figure: 4 PAPI Layout

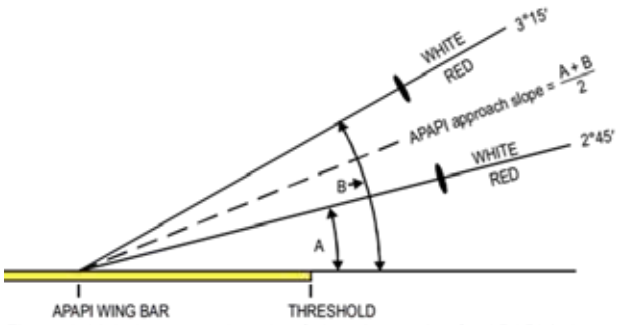

Figure: 5 Light beams and angle of elevation setting for APAI 3 deg approach slope

The optimum distance of PAPI/APAPI from the runway threshold is determined by:

a) the requirement to provide adequate wheel clearance over the threshold for all types of aircraft landing on the runway;

b) the operational desirability that PAPI/APAPI is compatible with any non-visual glide path down to the minimum possible range and height; and

c) any difference in elevation between the PAPI/APAPI units and the runway threshold.

Figure: 6 Installation and Components of PAPI Light

d) the remaining length of runway available for stopping the aircraft; and obstacle clearance.

Note: MEHT is the lowest height at which the pilot will perceive an on-slope indication over the threshold.

Table-1 : Summary of PAPI/ APAPI installed in different airports of Nepal

S.N.	Name of Airports	Design aircraft	Minimum Eye Height over Threshold (MEHT)	Design Approach Slope	Distance of PAPI/APAPI set from Threshold	Types of VASI	Remarks
1	Chandragadhi(R/W 10 side)	ATR 42	12.25 m	3º	250.60 m	PAPI (PU3L)	
	Chandragadhi(R/W 28 side)	ATR 72	12.25 m	3º	236.12 m	PAPI (PU3L)	in installation phase
2	Biratnagar (R/W 09 side)	ATR 72	12.25 m	3.15º	244.66 m	PAPI (PU3L)	
	Biratnagar (R/W 27 side)	ATR 72	12.25 m	3º	250.46 m	PAPI (PU3L)	
3	Rajbiraj (R/W 11 side)	N/A	N/A	3º	N/A	PAPI	in installation phase
4	Janakpur (R/W 09 side)	ATR 42	12.25 m	3º	249.26 m	PAPI (PU3L)	
	Janakpur (R/W 27 side)	ATR 72	12.25 m	3º	249.05 m	PAPI (PU3L)	
4	Simara (R/W 19 side)	ATR 42	12.25 m	3º	314.62 m	PAPI (PU3L)	
	Simara (R/W 01 side)	ATR 42	11.25 m	3º	202.69 m	APAPI (PU3L)	
5	Bhairahawa (R/W 10 side)	N/A	N/A	3º	N/A	PAPI (Europhane)	
	Bhairahawa (R/W 28 side)	N/A	N/A	3º	N/A	PAPI (Europhane)	
6	Nepalgunj (R/W 26 side)	ATR 72	14.02 m	3.4º	252.38 m	PAPI (PU3L)	
	Nepalgunj (R/W 08 side)	ATR 72	12.25 m	3º	248.31 m	PAPI (PU3L)	
7	Surkhet (R/W 02 side)	ATR 42	12.25 m	3º	196.07 m	PAPI (PU3L)	
8	Dhangadhi (R/W 09 side)	Fokker-100	14.82 m	3º	301.75 m	PAPI (PU3L)	
	Dhangadhi (R/W27 side)	Fokker-100	14.82 m	3º	310.87 m	PAPI (PU3L)	
9	Tumlingtar (R/W 34 side)	ATR 42	11.70 m	3º	239.15 m	PAPI (PU3L)	

Table-1 : Summary of PAPI/ APAPI installed in different airports of Nepal							
10	Tribhuvan Int'l Airport (R/W-02 Side)	N/A	N/A	3º	N/A	PAPI (Europhane)	in operation (old).
	Tribhuvan Int'l Airport (R/W-02 Side (new))	B777- 300	20.34 m	3º	336.69 m	PAPI (PU3L)	Temporarily installed & will be used only during construction work at Threshold-02.
	Tribhuvan Int'l Airport (R/W-20 Side)	N/A	N/A	3º	N/A	PAPI (Europhane)	in operation (old).
	Tribhuvan Int'l Airport (R/W-20 Side)	B777- 300	20.34 m	3º	409.07 m	PAPI (PU3L)-New	in installation phase, not commissioned
11	Lukla Airport (R/W-06 side)	DHC-6, D0 228	12.04 m	3.5º	71.07 m	**APAPI (PU3L)**	

References:

[1] ICAO Annex 14 Vol-I
[2] Aerodrome Design Manual Part 4, Doc 9157
[3] PAPI Design & Installation data from Electromechanical Department CAAN HQ & TIACAO.

Performance Based Navigation: a Better Option for Enhancing Accessibility to Hilly Airports

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Background

Nepal is a mountainous country occupying almost 83% of the land by mountainous and hilly areas. Many of the domestic airports in operation exist in the valleys of such areas. Access to such airports is just the direct VFR tracks. Lack of ground-based navigation aids has caused flight operations much more challenging at such airports. The situation is much more aggravated by bad weather conditions during the rainy seasons.

CAR-2 for 'Rules of the Air' does not allow VFR flights to fly into the clouds. However, it is realized that this rule is not 100% followed, especially during the rainy season. Majority of accidents that have occurred in Nepal are CFIT related accidents, and accident investigation reports revealed that 'VFR flights entering into IMC' in many cases has been found as the primary reason behind such accidents.

Many formal and informal discussions/communications were held among the concerned stakeholders in the past to develop some Performance Based Navigation (PBN) routes up to certain optimum points enroute to enhance the safety of flight operations and to increase the accessibility to the major hilly destinations. This article includes all those concepts in refined form.

Present Challenges of Hilly Airports

Hilly airports having enormous flight potentialities like Jomsom, Lukla, Jumla, Rara, Dolpa and Simikot are situated in the tough terrain environment. Such airports are lacking with ground-based navigation and surveillance facilities.

Besides that, those airports are connected to the major hub airports by the direct VFR routes only. Pilots do not have any opportunity to join protected IFR routes up to certain optimum locations from such destinations.

Because of the above reasons, flight operation during monsoon season to and from such airports are highly challenging. Aircraft in some inadvertent situations when enters the bad weather situations loses the visual references and in worst situation, crashes into the tough terrain resulting into CFIT accidents. This is a bitter truth in our case.

Significance of Performance Based Navigation

PBN is the method of navigation that allows aircraft operation on any desired flight path based on the performance of the aircraft within the coverage of ground- or space-based navigation aids or within the limits of the capability of self-contained aids, or a combination of these.

PBN helps in fulfilling the ICAO Strategic objectives of Airspace Concept such as enhancing safety, increasing ATC and airspace capacity, improving efficiency, enhancing accessibility to the airports and reducing the impact on the environment.

PBN now a days has become the utmost air navigation priority of global aviation communities. Aircraft manufacturers are introducing many new aircraft for industries having capabilities for different PBN operations and therefore, demands for necessary PBN airspace infrastructure have been rising day by day.

PBN can be used in developing efficient air route network. PBN allows different ways to construct most direct routes. As per PBN Manual, Doc 9613, following navigation specifications are used for enroute application:

RNAV 10 (RNP 10)	Oceanic/Remote
RNAV 5	Continental/Enroute
RNP 4	Oceanic/Remote
RNP 2	Continental/Enroute

Among the above specifications, for enroute application like ours, only the specifications that can be suited are either RNAV 5 or RNP 2. CAAN in its PBN Implementation Plan adopted a strategy to apply RNAV 5 specification for the construction of domestic air route network. Some efforts have already been taken place to develop the new domestic routes with RNAV 5 specification as per the plan.

However, ICAO APAC Seamless ATM Plan, V2.0, 2016 has expected that all Contracting States use RNP 2 navigation specification for enroute application in Category S airspace. APANPIRG ATM SG6 meeting as endorsed by the participating States also focuses

on the implementation of the same specification in enroute application. So, keeping in mind the above obligation, Nepal PBN Implementation Plan is to be revised and the existing domestic route structure is to be developed and/or revised accordingly. In doing so, consideration must also be given in enhancing the accessibility to major hilly airports of the country.

Significance of PBN for the betterment of air route network can be understood by the following bullets.

a. PBN routes with appropriate MEA will provide protected airspace for enroute navigation. For this purpose, RNP 2 routes with some protected altitude appropriate for STOL aircraft can be constructed.
b. This type of route provides the opportunity for cloud breaking if aircraft is within the weather and helps in reducing CFIT related accidents.
c. Diversionary or inbound PBN routes having lateral separation with the outbound route can also be developed for the safe and smooth flow of traffic.
d. There is no need of ground-based navigation aids to construct PBN routes based on RNP specification. Waypoints with WGS-84 coordinates of the desired position can be employed to construct such routes.
e. Aircraft having RNP 2 capability flown by appropriately trained pilots will have better access to the airports.
f. Thus, PBN can support enhancement in accessibility to remote airports by developing safe and cloud breaking procedures and by allowing capable aircraft to fly in PBN routes.
g. By doing so, PBN will also support in enhancing safety of aircraft operations to and from such airports.

Recommended Activities

To facilitate flight operation to and from remote hilly airports, by enhancing the accessibility to such airports, appropriate agencies within CAAN must put into effect the following activities:

1. Consult the stakeholders to collect the necessary information such as their needs or views about the ATS route structure.
2. Generate necessary waypoints and construct the preliminary outbound routes from Kathmandu and from some hub airports with appropriate PBN navigation specification, particularly RNP 2, having minimum enroute altitude up to the suitable waypoint appropriate for STOL aircraft operations. This activity shall be repeated until optimum MEA is achieved.
3. Develop similarly the diversionary or inbound routes with optimum MEA so that outbound and inbound or diverted traffic can be handled easily.
4. Name the waypoints and routes with the naming conventions as specified in the CAR-11.
5. Interact with the stakeholders and revise or refine the enroute procedures accordingly.
6. Check, verify and validate the procedure and finalize the whole design document package.
7. Get approval of the whole design document and publish the enroute procedures in AIP Nepal.

But that is not the end. Foremost thing is the aircraft and aircrew qualification to fly such routes. Once STOL aircraft operators and other interested operators get approval for RNP 2 application and when they implement such application, then only the published procedures may start showing the desirable effects in the Aircraft and ATS Operations.

Exemplary Domestic PBN routes

Some examples of PBN routes, particularly RNP 2, for some selective sectors are presented below. They are just the preliminary concept. They can be modified, or other appropriate routes can be developed as per the need, taking into consideration of enroute obstacles and STOL aircraft operations. Approximate values of MEA are presented below based on brief study of the available terrain data. Detail analysis of terrain data and route segments including the turn protection may result in different but more accurate values of MEA.

1. For flights originating from Kathmandu to hilly destinations towards East

a. Construct route T5 connecting Kathmandu-Rumjhatar-Bhojpur and up to specified waypoint WP3.
   - This route facilitates flights to the destinations like Lukla, Phaplu, Lamidanda, Rumjhatar, Bhojpur and Tumlingtar.
   - Develop inbound or diversionary route T6.

b. These routes will allow opportunities for STOL aircraft to fly IFR up to terminating waypoint destined for hilly airports. ATC during IFR Operation, instead of clearing aircraft up to IGRIS, can clear up to the end of the outbound route.

2. For flights originating from Biratnagar to hilly destinations

a. Develop routes T3 and T4 connecting Biratnagar to the specified waypoint WP3 and WP4 respectively which will facilitate flights to Tumlingtar and Bhojpur.
   - These routes may also serve as inbound or diversionary routes for one another.

b. Develop route T1 connecting Biratnagar to WP1 in the North.
   - This route will facilitate flights to Taplejung.
   - Develop inbound or diversionary route T2.

c. ATC during IFR Operation, instead of clearing aircraft, up to ITARI can clear up to the end of the outbound routes.

3. For flights originating from Kathmandu to hilly destinations towards West

a. Convert all three existing Whisky Routes W17, W19 and W41 routes into RNP 2 routes.

b. Construct RNP route T8 from PHR DME up to WP8.
   - This route may facilitate flights to Jomsom.
   - RNP route replacing W41 may facilitate diversionary route to the suitable alternate.

4. For flights originating from Bhairahawa to Pokhara

a. Develop route T13 connecting Bhairahawa, JULET and Pokhara.
   - RNP route replacing W41 may facilitate diversionary route to the suitable alternate.

5. For flights originating from Bharatpur to Pokhara

a. Develop route T9 connecting Bharatpur and Pokhara.
   - RNP route replacing W41 may facilitate diversionary route to the suitable alternate.

6. For flights originating from Nepalgunj to hilly destinations

a. Develop route T14 connecting Nepalgunj with Chaurjhari and beyond up to WP16.
   - This route will serve Chaurjhari, Jumla and Dolpa.
   - Develop diversionary route T15 on Nepalgunj-Salley Track which may also serve above destinations.

b. Develop route T16 connecting Nepalgunj with WP17 in the North.
   - This route will serve Surkhet, Bajura, Simikot and Jumla.
   - Develop diversionary route T17 on Nepalgunj-Sanphebagar Track which will also serve Safebagar and Bajhang airports.

c. ATC during IFR Operation, instead of clearing aircraft up to BABAI, can clear up to the terminating of the outbound route segments.

7. To relieve pilots from maintaining high and single MEA if any, the above routes may further be divided into segments with different MEAs.

8. These routes will allow opportunities for STOL aircraft to fly IFR up to certain specified waypoints, increasing the convenience to fly to hilly destinations and will help them in case of diversions also. By the terminating waypoints of the outbound routes, if weather becomes VMC, aircraft can request for cancelling IFR and maintain VMC till destination airports, otherwise, aircraft can elect one of the appropriate inbound or diversionary routes for the most suitable alternate(s).

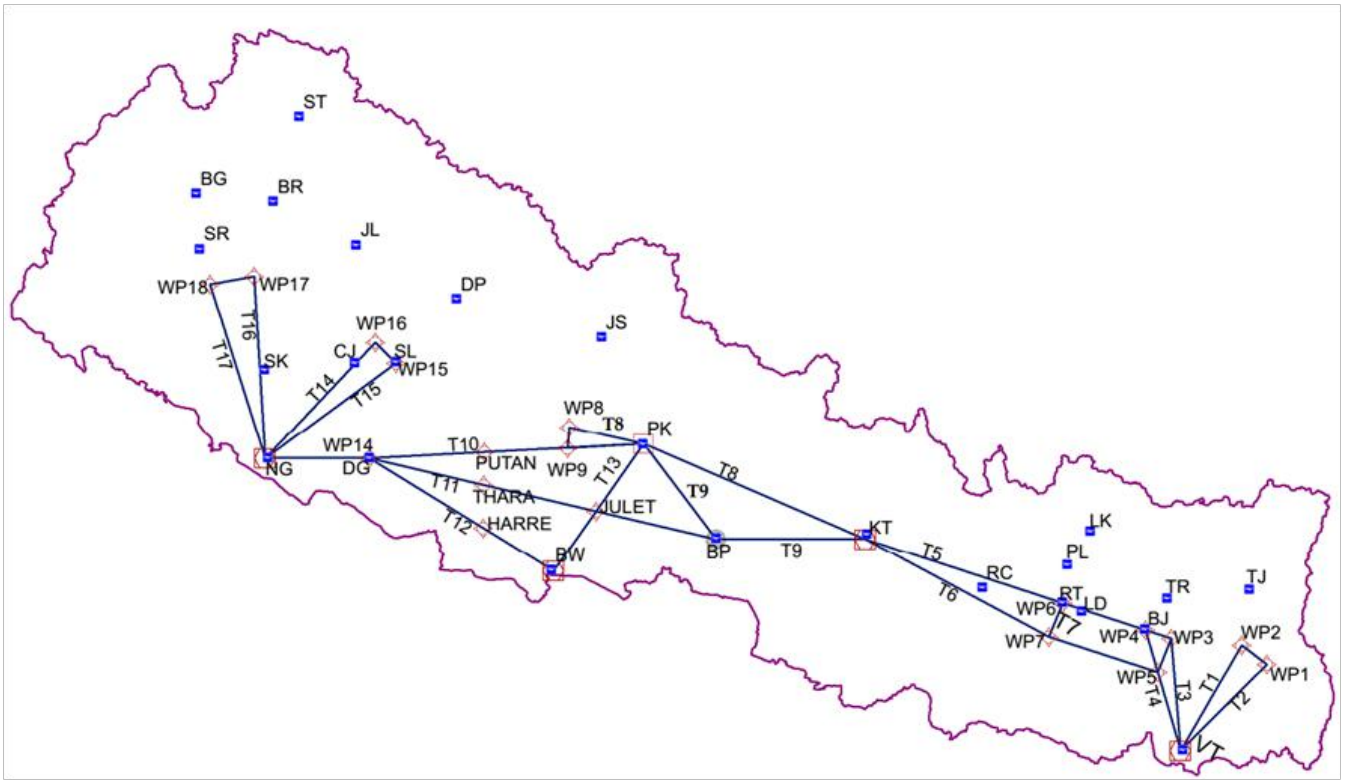
9. The network of routes proposed above is just the conceptual one. The concept can be deeply analyzed to explore the better options and necessary modifications can be done.

10. The tabulated list of RNP 2 routes along with conceptual route chart to enhance safety of flights to some major hilly destinations and to enhance accessibility to such airports are given below.

Table. List of Proposed RNP 2 Routes

Sector	Route Naming	Proposed MEA	Remarks
VT-WP2	T1	9000ft	1. Proposed routes can be divided into segments to achieve different MEA for each segment. 2. Proposed routes can be modified to achieve optimum MEA. 3. Waypoints to be named as per CAR-11 requirements. 4. Presented route names are just the examples. Can be named as per CAR-11 and ICAO ICARD guidance.
VT-WP1	T2	9500ft	
VT-WP3	T3	9000ft	
VT-WP5-WP4 (Bhojpur)	T4	9000ft	
KT-WP6 (RT)-WP4-WP3	T5	11500ft	
KT-WP7-WP5	T6	10500ft	
PK-WP8	T8	11500ft	
BW-JULLET-PK	T13	8500ft	
BP-PK	T9	7500ft	
NG-CJ-WP16	T14	11500ft	
NG-SL-WP15	T15	11000ft	
NG-WP17	T16	12500ft	
NG-WP18	T17	10000ft	

Conceptual RNP 2 Route Chart



उड्डयन क्षेत्रमा खेलकुद क्रियाकलापको महत्व

सन्तुष्ट कुमार बस्नेत
उपनिर्देशक, ने.ना.उ.प्रा

खेल त्यो हो जसले शारिरिक तन्दुरुस्ती र मानशिक तनाबलाई कम गरि शरीरलाई स्फूर्ति दिलाउछ । खेलले अनुशासन र आचरण सिकाउछ। यसले हत्या हिंसा गर्न जोगाउदै त्यस्ता उछृंखल भावना ल्याउन नदिई सरल सक्षम मानब बन्न सिकाउदछ। ठूलालाई आदर र सानालाई मायाँ गर्न अनि दुःखमा नआत्तिन र सुखमा नमात्तिइ धैर्य र शान्त रहने भावनाको विकास गराउँदछ । भनिन्छ खेल मानव जीवनशैलीको मापन पनि हो । आज बिश्वमा खेलकुद क्रियाकलापलाई मन नपराउने विरलै होलान । यसैको माध्यमबाट विश्व एक गाँउ बनेको छ। फेरी उड्डयन क्षेत्र त झन् यस्तो विधा हो जुन वास्तबमै विश्वको सर्वाधिक गतिशिल, उच्च प्राविधिक युक्त अत्यन्तै खर्चिलो, संवेदनशिल तथा अन्तराष्ट्रिय प्रकृतिको हवाई उड्ययनलाई सुरक्षित, नियमित, छरितो र भरपर्दो बनाउने कार्यमा तल्लीन नागरिक उड्डयनका कर्मचारीहरु सदैव सवल र निरोगी हुनु जरुरी हुन्छ । नेपाल नागरिक उड्डयन प्राधिकरणले पनि खेलकुद क्रियाकलापको महत्वलाई आत्मसात गर्दै नागरिक उड्डयन खेलकुद क्लब सम्बन्धी निर्देशिका, २०६९ जारी गरेको छ । जसमा उल्लेखित प्रस्तावना तथा काम, कर्तब्य र अधिकार देहाय बमोजिम उल्लेख गरिएको छ।

प्रस्तावना

नेपाल नागरिक उड्डयन् प्राधिकरणमा कार्यरत विभिन्न सेवा, समुह, उपसमुहका कर्मचारीहरुलाई खेलकुद लगायत अन्य अतिरिक्त क्रियाकलापको माध्यमबाट शारीरिक एबं मानसिक रुपमा चुस्त दुरुस्त राख्न, कर्मचारीहरु वीच एकता भाइचारा र आत्मीयताको भावनाको विकास गर्न, विभिन्न वायुसेवा कम्पनी, संघ संस्था र प्राधिकरण वीच रही आएको सौहार्दपूर्ण एबं सुमधुर सम्बन्धलाई प्रगाढ गरी प्राधिकरणलाई सबल सुदृढ संस्थाको रुपमा विकसित गर्न एक खेलकुद क्लवको स्थापना गर्न आबश्यक भएकोले ने.ना.उ.प्रा.ऐन, २०५३ को दफा ३५ ले दिएको अधिकार प्रयोग गरी नेपाल नागरिक उड्डयन प्राधिकरणले नागरिक उड्डयन खेलकुद क्लवको संचालन तथा ब्यबस्थापन निर्देशिका जारी गरेको छ।

✓ त्यस्तो निर्देशिकाको पालन गर्न सम्बन्धित सबैको कर्तब्य हुनेछ।

काम, कर्तब्य र अधिकार

१. कार्यसमितिले आफ्नो उद्देश्य पुरा गर्न प्रचलित ऐन, नियम एबं प्राधिकरणको नियम निर्देशनको परिधि भित्र रही विभिन्न प्रकारका Indoor तथा Outdoor का खेलकुद गतिबिधि एबं अन्य क्रियाकलापहरु आयोजना एबं संचालन गर्ने ।

२. कर्मचारीहरु वीच खेलकुद गतिबिधि प्रति अभिरुची जगाई खेलकुद कार्यक्रममा बढि भन्दा बढि सहभागीता बढाउने ।

३. कर्मचारीहरु वीच खेलको माध्यमबाट आपसी सहयोग, मित्रता, एकता एबं आत्मीयता जगाउन प्रयत्नशिल रहने ।

४. प्राधिकरणको बार्षिक उत्सब लगायत अन्य अवसरहरुमा विभिन्न खेलकुद र अतिरिक्त क्रियाकलापहरु संचालन ब्यबस्थापन एबं आयोजना गर्ने ।

५. अन्तरसंस्थान, अन्य सरकारी एबं गैर सरकारी संघ संस्थाहरुले आयोजना गरेको खेदकुद एबं अतिरिक्त क्रियाकलापहरुमा प्राधिकरणको तर्फबाट सहभागीता जनाई प्राधिकरणको छबी उच्च बनाउन प्रयत्न गर्ने ।

६. आफैले पनि अन्तरसंस्थान, वायुसेवा कम्पनी, संघ-संस्था विच खेलकुद प्रतियोगीताहरु आयोजना गराउने ।

७. खेलकुदको लागी पुर्वाधार तयार गर्ने, तिनको संरक्षण, संम्बर्द्धन एबं मर्मत सम्भार गर्ने गराउने ।

८. हाजीरी जबाफ, निबन्ध प्रतियोगीता, कविता प्रतियोगीता, रक्तदान, पर्यटन प्रबद्धन हुने अन्य किसिमका गतिविधिहरु संचालन गर्ने ।

९. कर्मचारीहरुका शारीरिक तथा मानसिक तन्दुरुस्तका लागी समय समयमा योग शिविर, जीमखाना संचालन गर्ने ।

१०. प्राधिकरण एबं बायुसेवा कम्पनीका ब्यबस्थापक एबं Executive Level का पदाधिकारी बीच विभिन्न खेलकुद तथा अन्य कार्यक्रमहरु गरी सम्बन्ध सुमधुर बनाउन विभिन्न किसिमका गतिबिधिहरु संचालन गर्ने ।

११. प्रतियोगीताका बिजेताहरुलाई उचित प्रमाण पत्र, पुरस्कार तथा पदकको ब्यबस्था गर्ने ।

क्लवको गतिबिधि

प्रारम्भमा खेलकुद क्रियाकलाप प्राधिकरणको वार्षिकोत्सबको

समयमा मात्र सकृय भै विभिन्न कार्यक्रमहरु गरिदै आए पनि पछिल्लो चरणमा आएर अन्तर संस्थान प्रतियोगितामा समेत खेलाडीहरु सहभागी भै उनीहरुले उत्कृष्ट प्रदर्शन गर्दै आएका छन् । विगतमा सेफ्टी अफिसको उबढ खावड प्रांगनमा डोरीको नेट टाँगी ब्याडमिन्टन खेलिन्थ्यो भने हाल आएर एक नागरिक उड्डयन खेलकुद क्लब कै रुपमा विकसित हुन गयो । यस क्लवको संरक्षकको रुपमा नागरिक उड्डयन प्राधिकरणका महानिर्देशकज्यू, त्यसै गरि प्रशिक्षण प्रतिष्ठान प्रमुख सहसंरक्षकको रुपमा रहि प्रथम खेलकुद क्लवका अध्यक्ष श्री कृष्ण बहादुर थापा, दोश्रो कार्य समितिका अध्यक्ष श्री जगन्नाथ निरौलाले यस क्लबलाई गतिशिलता दिनुभयो । तेश्रो कार्यकालमा पुनः श्री कृष्ण बहादुर थापा हुदै चौथो वर्तमान कार्यसमितिको अध्यक्षमा म उपनिर्देशक सन्तुष्ट कुमार बस्नेत, उपाध्यक्ष दिप्ता पौड्याल, सदस्यहरु-लेखनाथ सुबेदी, अस्मीता सुब्बा, पुष्पराज न्यौपाने, प्रज्वल दुंगाना, अमर पोखरेल, सन्तोष अवाले, मनोज बुढाथोकी, जंग पुर्कुटी र सदस्य सचिव उद्व फुयाल समेत ११ जना रहेको छ । खेलकुद क्लबको स्थापना भैसके पछि प्रशिक्षण प्रतिष्ठानको परिशरमा ब्याडमिन्टन कभर्डहल, टेबलटेनिस लगायत अफिसकोठाहरु निर्माण गरिएको थियो । त्रि.अ.वि.आधुनिकरण विस्तार तथा निर्माणले प्रतिष्ठानको भवन संगै कभडहलमा समेत क्षति पुग्न गयो । तत्पश्चात एकेडेमीको सम्पूर्ण काम कारबाही गट्ठाघरमा सर्न गयो भने खेलकुद क्लबको अस्तीत्व न घर न घाटको हुन पुग्यो । यसको नत कुनै खेलकुद पूर्वाधार छ, न कतै यसको लागि जग्गा निर्धारण गरिएको छ । हुँदा हुँदा खेलकुद क्लवको अफिस कोठा समेत नभएको अवस्था छ । शून्यबाट सुरु भएको खेलकुद पुर्वाधार शून्यमै आइपुगेको स्थिति छ । यस्तो चुनौती नै चुनौतीको बीचमा प्राधिकरणको बार्षिकोत्सबको मुखमा हामीलाई यस क्लबको कार्यभार सुम्पने सुवर्ण मौका प्राप्त भयो । कार्यसमितिमा सबै पेशागत संघ संगठनबाट मनोनयन भै आएका खेलाडीहरु भएकोले खेलको विशेषता नै चुनौतीलाई स्वीकार गरि परिणाम मुखी बनाउनु हो भन्ने जानकार भएकोले नै होला सायद काम गर्न कुनै असहज भएन । संरक्षक महानिर्देशक, सहसंरक्षक प्रशिक्षण प्रतिष्ठान प्रमुखको प्रत्यक्ष सहयोग, सल्लाह, सुझाब र निर्देशनले हामीलाइ प्रेरणा मिलेको छ । त्रि.अ.वि.ना.उ.का.का महाप्रबन्धक लगायत युनियनका साथीहरुको सहयोगमा यूनियनहल भित्र रहेको कोठा मर्मत सम्भार गरी खेलकुद क्लबलाई अस्थायी प्रयोजनार्थ आवश्यक सरसामान सहित प्राप्त भयो । त्यही हलबाट टिटि खेलको आरम्भ गरि बाहिर चोरमा भलिबल खेलबाट खेलको समापन गरिने निधो गरियो ।

वर्तमान कार्यसमितिले प्राधिकरणको बार्षिकोत्सबको बेला मात्र सकृय नभई दीर्घकालीन रुपमा सम्पूर्ण बहालवाला तथा सेवा निवृत प्राधिकरणका कर्मचारीहरुको स्वास्थ्य लाभ कसरी गर्न सकिन्छ भनी स्थायीत्व हुने गरि खेलकुद पूर्बाधार बनाउनु पर्ने अबधारणा अगाडी बढाइएको छ । पूर्वाधार कस्तो बनाउने ? कहाँ बनाउने त ? कुन कुन खेललाई समाबेस गर्ने ? प्रश्नै प्रश्न भित्रको परिकल्पना यस्तो रहेको छ -

१. एउटा बहुद्देश्यीय कभर्डहल जहाँ कम्तिमा ३ वटा ब्याडमिन्टन कोर्ट होस जसको दुबै साइडमा प्याराफीट, अगाडी स्टेज अनि कसैले पनि खेल खेल्नको लागी लामो समय सम्म पालो कुर्न नपरोस भने प्राधिकरणको बार्षिकोत्सब लगायत अन्य ठूला ठूला कार्यक्रमहरु पनि यसै हलमा सम्पन्न गर्न सकियोस ।

२. एउटा सुन्दर पक्की भवन होस जस भित्र स्नूकर/विलियार्ड तथा टेबल टेनिसको बोर्ड कम्तीमा २/२ सेट हुन, माथिल्लो तल्लामा योगाहल, जीमखाना, म्यूजीक रुम साथै एभिएसन लाइब्रेरी, सभा सेमीनार हल लगायत अफिस, स्टोर रुम, साउना/सावर एबं बाथरुम आदिको ब्यबस्था होस ।

३. फायर लगायत अन्य कर्मचारीहरुको लागी ज्यादै उपयोगी हुने फुटसल कभर्डहल यसैको प्रांगनमा बनोस ।

४. भलिबल, बास्केटबल, लङ्गटेनिसको साथै अन्तराष्ट्रिय स्तरका स्वीमिङ्ग पुल र फुटबल मैदानको निर्माण होस जहाँ खेलकुदको क्षेत्रमा समेत दोश्रो विकल्पको रुपमा प्राधिकरण हुनेछ ।

५. सुरक्षाको लागी सेक्यूरिटि भवन सहित गार्डको ब्यबस्था, ब्यबस्थापनको लागी आवश्यक कर्मचारीहरु, उच्चकोटीको क्याफ्टेरीया, पार्किङ्ग तथा पेरिफेरि रोडको राम्रो प्रवन्ध होस ।

यस्ता किसिमका खेलकुद पुर्वाधारहरुबाट प्राधिकरणका तीनै वटा क्षेत्रहरु सकृय हुनेछन् –

क. कर्मचारीहरुको शारीरिक तथा मानसिक स्वास्थ्य लाभ हुने ।

ख. प्राधिकरणको नाम, इज्जत र प्रतिष्ठा बढ्ने ।

ग. प्राधिकरणको आम्दानीमा बृद्धि हुने ।

यसरी दिर्घकालिन रुपमा खेलकुद क्लबको लागी जग्गाको पहिचान गर्ने क्रममा नागरिक उड्डयन प्राधिकरणमा कार्यरत विभिन्न तह र तप्काका कर्मचारीहरुको पहुच योग्य स्थान र अधिकांस कर्मचारीहरुले दिएको राय, सल्लाह र सुझावहरुको आधार यस प्रकार थियो प्राथमिकता क्रम-

१. सिनामंगल आयोजना परिसर

२. कार्गो विल्डंगको दक्षिण तिर

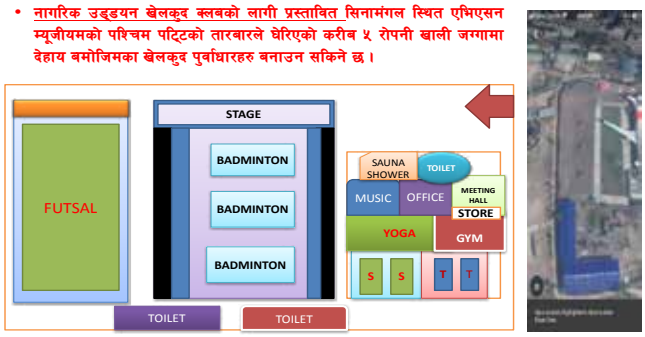
३. धाबणमार्गको पूर्बीतिर पेप्सी एरियामा

४. नागरिक उड्डयन प्रशिक्षण प्रतिष्ठान, गट्ठाघर

वास्तवमा सुनेको, देखेको र भोगेको कुरामा आकास जमीनको फरक हुन्छ भन्थे हो रहेछ । प्राथमिकता क्रमको कुरा गर्दा नम्बर १-सिनामंगल आयोजना परिसरमा पुगियो । त्यस क्षेत्रमा भएका

जग्गाहरु मध्ये पाँचतारे होटल, एभिएशन म्यूजीयम, स.उ.स. विभाग, अस्थायी टहरा तथा स्टोर, आयोजनाको अफीस, शसस्त्र प्रहरी बल अनि केएमसी अस्पतालले पार्किङ्गको रुपमा उपभोग गरेको देखियो । दोश्रो र तेश्रो विकल्पमा विमानस्थल स्तरोन्नती गर्दा माष्टर प्लानमा सबै Occupied हुने पाइयो । अन्तिम विकल्प प्रशिक्षण प्रतिष्ठानमा टाडै भए पनि सबै खेलकुद पूर्वाधारहरु एकै ठाँउमा बनाउन सकिन्छ भनि ढुक्क भएका थियौ विडम्बना प्रतिष्ठान प्रशिक्षणको आफ्नै भवन पनि कता जाने हो भन्ने हल्ला समाचारमा आएकोले निराशाजनक अवस्था देखा पर्न गयो ।

यदि साँच्चै नै स्थायी रुपमा कतै पनि खेलकुद क्रियाकलापको लागी जग्गा यकिन गरी खेलकुद पुर्वाधार बनाउन सकिएन भने क्लबको अस्तीत्व नै एकदिन पूर्ण रुपमा नष्ट भएर जाने सम्भावना देखिन्छ । हामी पुनः विकल्पको खोजीमा आदरणिय प्रतिष्ठान प्रमुख श्री देबेन्द्र के.सी.ज्यू सहित आयोजना परिसर सिनामंगलमा स्थलगत निरीक्षण गरि Aviation Museum को पश्चिम पट्टीको करीब ५ रोपनी तारबारले घेरेको प्रयोग विहिन अवस्थाको जग्गा फेला पारी श्रीमान् महानिर्देशकज्यूसंग कुरा गर्दा उहाँ ज्यादै सकरात्मक हुनु भयो । तत्पश्चात ५ वटै युनियनका पदाधिकारीहरु र ६ वटै पेशागत संघ संगठनका साथीहरु सहित क्लबको संयुक्त मिटिङ्गमा एकमात्र एजेण्डाको रुपमा खेलकुद क्रियाकलापको लागी उक्त जग्गाको बारेमा छलफल गर्दा सबैले मन पराई श्रीमान् महानिर्देशकज्यू समक्ष अनुरोध गर्ने भनी सर्वसम्मतीबाट निर्णय गरियो ।



उक्त बैठकको निर्णयको फोटोकपी सहित सहसंरक्षकज्यू मार्फत संरक्षकज्यूलाई अनुरोध सहित २०७५।७।२६गते प्रधान कार्यालयमा प्रस्ताप दर्ता गराईयो । श्रीमान् महानिर्देशकज्यू लगायत सम्पूर्ण ब्यबस्थापनका सरहरु सकरात्मक हुनुभएकोले उक्त प्रस्ताव उपर क्लवको लागी जग्गा आवश्यक खेलकुद पूर्वाधार बनाउन मिति २०७५।८।१७ गते ऐतिहासिक निर्णय भएको छ ।

क्लबको दायरालाई सिमित क्षेत्रमा मात्र राख्ने हाम्रो भिजन, मिसन थिएन र हुदैन पनि । त्यसैले हामी प्राधिकरणको क्षेत्राधिकार भित्र रहेका विभिन्न ठाउँमा छरिएर रही प्रयोग बिहिन अवस्थाका जग्गाहरुको अवलोकन गर्ने क्रममा ठेचो र नलिनचोकमा पुगेका थियौं । अवलोकन पश्चात ठेचोमा Aviation Hospital को परिकल्पना गरि जहाँ लाइसेन्स होल्डर एभिएशनकर्मीहरुले नियमानुसार आफूले अनिवार्य रुपमा मेडिकल चेकअप (Class-1, Class-2, Class-3) गराउनु पर्ने प्रावधान छ, सो कुरालाइ एकैठाँउबाट गराउन सकिने जसबाट लाइसेन्स होल्डरको समय बचत मात्र होइन गुणस्तर मेडिकल चेकअप समेत हुने । सहज रुपमा इमरजेन्सी सेवा उपलब्ध गराउन सकिने साथै प्राधिकरणका कर्मचारीहरुलाई विरामी पर्दा सहुलियत तथा भरपर्दो उपचार सुविधा पनि दिलाउन सकिने । त्यसै गरि नलिनचोकमा Aviation College तथा University खोल्न सकिने जसमा Theory of Flight, Air Navigation , Rules of The Air, Air Traffic Services लगायत विभिन्न एभिएशन सम्बन्धित विषय समेत समावेश राखी पढाई गराउन सकिने । यसबाट एभिएशन प्रति सबैको चासो बढ्न सक्नेछ भने कर्मचारीहरुका सन्ततीले सहुलियत दरमा उच्चस्तरको शिक्षा आर्जन गर्न सक्नेछन् ।

प्राधिकरण जनतालाई हवाई सेवा दिई आफ्नो लागी आफैले Aeronatutical तथा Non Aeronautical कमाई गरि बाच्नु पर्ने अविछिन्न उत्तराधिकारवाला एक स्वशासित र संगठित संस्था हो । आर्मी, पुलिस, सशस्त्रबल लगायत अन्य निकायहरुले पनि आफ्नै स्कूल, कलेज, अस्पताल लगायत क्लब संचालन गरि कर्मचारीहरुलाइ सेवा तथा सुविधा दिदै सर्वसाधरणलाई समेत उच्च गुणस्तरीय सेवा दिइ आर्थिक लाभ पनि गरेको पाइएकोले प्राधिकरणले त झन् स्वआर्जन गरि सुरक्षित तथा भरपर्दो हवाई संचालन गर्नु पर्ने भएको हुदा यस प्रति सबैको ध्याननकर्षण आवश्यक देखिन्छ। कर्मचारी कल्याणकोषको सहयोग र सहकार्यमा प्राधिकरणकै ब्यबस्थापनमा रहि उच्च छवि बनाई अनुभवि र केही गरु भन्ने इच्छा शक्ति भएका अवकास प्राप्त ब्यक्तित्वहरुबाट संचालन-ब्यवस्थापन गर्न सकिने । संपूर्ण योजनाहरु हामीले उच्च ओहोदामा आसिन सम्पूर्ण सरहरु समक्ष प्रस्ताव राखिदा मिश्रित प्रतिक्रिया प्राप्त भएको अवस्था छ ।

महत्व

वास्तवमा Stress तथा Fatigue Management बन्दकोठामा Theory पढाएर मात्र Relief हुने कुरा होइन । राम्रो तलव, भत्ता, सुविधा एबं बैदेसिक यात्राले क्षणिक सन्तुष्टी दिलाउछ भने शारीरिक तथा मानशिक कसरतले निरागी भइ जीवनभर पूर्ण सन्तुष्टी प्राप्त गराउदछ । धन, बल र शक्तिले स्वस्थ्य किन्न पनि सकिदैन । स्वस्थ्य केबल शारीरिक कसरत, योग ,ध्यान, प्रणायाम, प्राकृतिक आहार, विहार, सकरात्मक सोचाई, संगीत एबं मनोरन्जनात्मक क्रियाकलापहरु आदिले मात्र सम्भव छ । बाहिरी सरसफाई गर्न जति सजिलो छ भित्री सरसफाइ गर्न त्यति सहज छैन । शरीरमा भएका विजातीय तत्वलाई खेलकुद क्रियाकलाप एबं षटकर्मको

माध्यमबाट बाहिर निकाल्न सकिन्छ। भनिन्छ रोग लागेपछी उपचार गर्नु भन्दा रोग नै लाग्न नदिनु उत्तम हन्छ। उड्ययन क्षेत्रमा जहिले पनि उच्च मनोबल , पूर्ण सन्तुष्टी, सकरात्मक सोचाइको साथै सदा शारीरिक तन्दुरुस्ती भै रहनु पर्ने भएकोले खेलकुद क्रियाकलाप उडड्यन क्षेत्रमा ज्यादै महत्वपूर्ण छ।

साच्चै भन्ने हो भने हामी आफ्नो स्वास्थ्य प्रति त्यति ध्यान दिदैनौ। करोडौ लगानी गरेर घर बनाउछौ तर घरमा आफु लगायत परिवारको लागी शारिरिक कसरत गर्नको लागी एउटा कोठा समेत छुट्याउदैनौ। त्यस्तै कार्यालयमा समग्र कर्मचारीहरुको लागी Cardio Exercise आवश्यक देखिन्छ। त्यसैले प्रत्येक कार्यालयहरुमा कम्तीमा २ ओटा कोठाहरु जसमध्ये एउटा कोठा Cardio Exercise तथा Relaxation को लागी र अर्को कोठा Indoor Game (जस्तै टिटि, स्नूकर, विलियार्ड आदि) को लागी ब्यबस्था हुनु जरुरी छ। सबै विमानस्थल परिसरमा यस्तो ब्यबस्था भै दिए स्ट्रेस तथा थकानको वखत विमानचालकले समेत आवश्यक पर्दा उपभोग गर्न सक्ने छन् जसवाट यात्रु तथा विमान सुरक्षामा समेत लाभदायक हुन सक्छ। नेपाल नागरिक उड्डयन प्राधिकरणमा विभिन्न सेवा, समूह, उपसमूहमा कार्यरत कर्मचारीहरु हवाई संचार संचालनका क्रममा अत्याधिक रेडियसन सहन गर्नु पर्ने वाध्यता, अन्यन्तै स्ट्रेसमा रहि हवाई सेवा संचालन गर्नु पर्ने परिस्थीति, आपतकालिन अवस्थालाई मध्यनजर गर्दै शारीरिक रुपमा सुगठित भइ हरहमेसा सकृय रहनु पर्ने कर्तब्य, यी यावद कुराको लागी Physical Fitness एकदमै अपरिहार्य भएकोले हरेक विमानस्थलहरुमा विमानस्थल निर्माण कै क्रममा तथा निर्माण भै सकेका विमानस्थलहरुमा पनि सुविधायुक्त खेलकुद क्रियाकलापको लागी दीर्घकालीन रुपमा खेलकुद पूर्वाधार सहित हुने गरि Policy Level बाटै यसको ब्यबस्था हुन आवश्यक देखिन्छ।

अन्तमा

प्रत्येक ब्यक्तिले कुनै न कुनै रुपमा शारीरिक कसरत त गरिरहेकै हुन्छन्। अधिकांस मानिस हामी यस प्रति सचेत नै छौ ता पनि हामीले देखेको भोगेको कुरा के छ भने जो यस प्रति नकरात्मक दृष्टिले हेर्छ, कुनै पनि खेलकुद क्रियाकलापहरुमा सहभागी हुदैन भने त्यस्ता ब्यक्ति सधै आफु पनि तनावमा हुन्छ अरुलाइ पनि तनाब दिन्छ। आफ्नो फाइदा मात्र हेर्ने ,आफ्नो कुरामात्र ठिक ठान्ने , समूहमा मिल्न नसक्ने एबं स्वार्थी स्वभाबका हुन्छन् जुन संस्थाको लागी त्यति राम्रो मानिदैन। खेलले प्रतिष्पर्धामा सहभागी भै रहने हुँदा जितहारको कुरा स्वभाविक रुपमा लिने बानी बसाउछ। समूहमा काम गर्न सिकाउछ साथै मनोबल एबं आत्माविश्वास बढाइ काम गर्ने हौसला समेत प्रदान गराउदछ। खेलकुद जसले बुझेको छ उसले खेलकुद क्रियाकलापलाई शरीरको महत्वपूर्ण अंग, प्राणवायु अक्सीजन, जीवनको सहारा सम्झन्छ । यसको नत कुनै जात छ ,न कुनै धर्म या भाषा। न धनी न गरिब, न तहगत विभेद। छ त केबल माया, ममता, एकता, भाइचारा, शारीरिक एबं मानशिक तन्दुरुस्तता, संस्था प्रति इमान्दारिता, बफादारिता एबं कर्तब्यपरायणता । धन्यवाद।

समाप्त

हवाई पूर्वाधारमा किन पछि पऱ्यौ ?

नबीन प्रसाद आचार्य
उपनिर्देशक, ने.ना.उ.प्रा

पृष्ठभुमी :

बि.सं.२००६ सालमा काठमाडौको गौचरमा ४ सिटे सानो विमान अबतरण गरे पश्चात शुरु भएको हाम्रो हवाई सेवाको इतिहास आज २०७५ साल सम्म आइपुग्दा ६९ बर्ष पुरा भै सकेको छ। त्यसो त अमेरिकाका राइट ब्रर्दसले सन् १९०३ मा पहिलो पटक विमान उडाएर शुरु गरेको हवाई जहाजको इतिहासको ११५ बर्ष भै सकेको छ। यस अवधिमा विमानहरुको बनावट र प्रबिधिहरुमा धेरै विकास भै सकेका छन्। यसै कारणले गर्दा बिश्वको कुना कुनामा पनि सहज रुपमा आवतजावत गर्न सम्भब भएको छ। यसरी हवाई जहाजहरुको निर्माण र प्रबिधिको विकाससंगै अर्न्तराष्ट्रिय हवाई सेवाको बिस्तार नभैदिएको भए, आजको द्रुत आर्थिक विकास, पर्यटन विस्तार र बिश्वको सबै भागहरुमा व्यक्ति र राष्ट्र-राष्ट्र बिचको पहुँच र सम्बन्धको बिस्तार यती सहज रुपमा हुने थिएन।

नेपालमा हवाई सेवा :

नेपालमा हवाई सेवाको विकासको कुरा गर्दा नेपाल एयरलाइन्सको भूमिका अगाडी आउछ। २०१५ सालमा स्थापना भएको नेपाल एयरलाईन्स २०७५ सालसम्म आइपुग्दा ६० बर्ष भै सकेको छ। हालै मात्र दुईवटा एयरबस ३३०-२०० सेरिजको विमान खरिद गरेर अन्तर्राष्ट्रिय उडानतर्फ आफ्नो संजाल बढाएको हाम्रो देशको एयरलाइन्सले नयाँ एयरबस भित्र्याएको महिनौ भै सक्दा पनि आन्तरिक बिबादको साथै अर्न्तराष्ट्रिय सेवा बिस्तारको चाजोपाजो मिलाउन नसक्दा नयाँ भित्रिएका विमानहरुलाई पूर्ण रुपमा संचालनमा ल्याउन सकेको छैन। बिश्व भरनै हवाई यातायातको क्षेत्रमा भएको तिब्र बृद्धिसंगै सन् १९८० देखिनै बिभिन्न देशहरुले खुल्ला आकास तथा बजार नीति अवलम्बन गरी एकअर्को देशसंग हवाई सम्झौता गर्दै अन्तर्राष्ट्रिय हवाई सेवाको बिस्तार गरे। नेपालले पनि सन् १९९२ मा खुल्ला आकाश नीति अबलम्बन गरे पश्चात बिभिन्न मुलुकहरुसंग हवाई सम्झौता हुदै गयो। यस अनुसार आजसम्म ३८ मुलुकहरुसंग हवाई सेवा संझौता भई सकेको छ। हाम्रो देशमा सन् १९९२ पश्चात खुल्ला आकाश नीतिसंगै हवाई सेवामा निजी वायुसेवा कम्पनीहरु आउन थाले। आन्तरिक तर्फ सन् १९९६ मा स्थापना भएको बुद्ध एयर र सन् १९९८ देखि संचालनमा रहेको यति एयरलाईन्सले निरन्तर रुपमा सेवा संचालन गर्दै आन्तरिक तर्फको हवाई यातायात सेवा संचालनमा महत्वपुर्ण योगदान पुरयाएका छन्। सन् १९९२ पश्चात आन्तरिक तर्फ निजी वायुसेवा कम्पनीहरु स्थापना हुने, केही बर्ष संचालन हुने र त्यसपछि बन्द हुने क्रम चलि रहयो। ठुलो पुँजी, उच्चप्रबिधि र कुशल व्यवस्थापनको आवश्यकता पर्ने हवाई सेवामा आन्तरिक तर्फका नेकोन एयर, नेपाल एयरवेज, एभरेष्ट एयर, कस्मिक एयर तथा अग्नि एयर जस्ता निजी बायुसेवा कम्पनीहरु लामो समय टिक्न सकेनन् र बन्द भए। हाल आन्तरिक तर्फ १० वटा निजी बायुसेवा कम्पनीहरु रहेका छन्। त्यस्तै हेलिकप्टर तर्फ ९ वटा कम्पनीहरु संचालनमा छन्। हेलिकप्टर कम्पनीहरुले पनि खोज तथा उद्धार, पर्यटन, विकास निर्माण लगायत आर्थिक क्षेत्रको विकासमा योगदान पुरयाएका छन्। अन्तर्राष्ट्रिय उडान तर्फ नेपालका एयरलाईन्सहरुमा बुद्ध एयरबाट भारतको केही शहरमा भईरहेको उडानहरुको अतिरिक्त, काठमाडौलाई अधार बनाएर २०१६ देखि संचालनमा रहेको तिब्बत एयर र यति एयरलाइन्स ग्रुपको संयुक्त लगानीमा संचालनमा रहेको हिमालय एयरलाईन्स र नेपालको ध्वजाबाहक नेपाल एयरलाईन्स रहेका छन्। अन्य देशहरुको दाँजोमा हाम्रो देशको हवाई सेवाको विकास ज्यादै सुस्त रुपमा अघि बढेको देखिन्छ। नेपाल एयरलाईन्स भन्दा दुई बर्ष पछि सन् १९६० देखि सेवा संचालन गरेको एसियन मुलुकहरुका थाई एयरवेज, सन् १९७२ देखि सेवा बिस्तार गरेको सिंगापुर एयरलाईन्स, सन् १९८५ पछि बिस्तार भएको इमिरेटस् एयर तथा १९९४ पछि संचालनमा आएको कतार एयरवेजको बिश्वव्यापी सन्जालसंग नेपाल एयरलाइन्सलाई दाँज्दा हाम्रो अबस्था कमजोर र हामी पछि परेको यथार्थ हो।

हवाई पूर्वाधारहरुको अवस्था:

हवाई सेवाको विकास र बिस्तारका लागि आवश्यक पर्ने पूर्वाधार हरुको निमार्ण हुनु अति जरुरी हुन्छ। जलमार्गबाट बन्चित नेपालमा पर्यटन विकास र आर्थिक सम्पन्नताको लागि हवाई यातायात क्षेत्रको विकास हुनु जरुरी थियो। तर बिगतमा पुर्वाधारहरुको विकास र बिस्तार तर्फ ज्यादै सुस्त गतिमा कामहरु भए। हवाई ट्राफिकको बृद्धिको दाजोमा बिगत १० बर्षदेखि हाम्रो एकमात्र अर्न्तराष्ट्रिय विमानस्थलमा क्षमता विस्तारको कार्यहरु ज्यादै सुस्त

गतिमा रहयो । दक्षिण एशियाका मूलुकहरुले हवाई पुर्वाधारमा गरेको विकाससंग दाँज्दा हामी पछाडि परेका छौं । भारतको इन्दिरा गान्धि अन्तर्राष्ट्रिय विमानस्थलको बार्षिक ७ करोड हवाई यात्रु क्षमता रहेको सुबिधा सम्पन्न विमानस्थल को त कुरा छाडौ, हाम्रो विमानस्थल बंगलादेश र श्रीलङ्काको अन्तर्राष्ट्रिय विमानस्थलको दाँजोमा पनि पूर्वाधार निर्माणको कार्यमा पछाडि पर्‍यो ।

आजका अन्तर्राष्ट्रिय विमानस्थलहरु विमानहरुको उडान र अवतरण गर्ने स्थानको रुपमा मात्र सिमित भएका छैनन् । विमानस्थल क्षेत्रभित्र हवाई यात्रुले मात्र आवतजावत गर्ने नभई सर्बसाधरणहरुको ठुलो उपस्थिति हुने गरेको छ । विमानस्थल क्षेत्रभित्र ब्यापारिक मल, होटलहरु र थुप्रै आर्थिक कारोबारका गतिबिधिहरु हुने गरेका छन् । यसको उदाहरणको लागि जर्जर मरभुमिमा झण्डै १० बर्ष लगाएर बनाएको २२ बर्ग किलोमिटरमा फैलिएको कतारको हमाद अन्तर्राष्ट्रिय विमानस्थल र युनाइटेड अरब इमिरेट्सको दुबाई अन्तर्राष्ट्रिय विमानस्थललाई हेर्न सकिन्छ । १२ बर्ग किलोमिटरमा फैलिएको दुबई एयरपोर्टले मात्र ९० हजार जनालाई प्रत्यक्ष रोजगारी प्रदान गरेको र यो रोजगारी युनाईटेड अरबको कुल रोजगारीको २१ प्रतिशत भएको बताइएको छ ।

बाहिरी संसारमा विमानस्थल क्षेत्रको पूर्वाधारहरुमा तिब्ररुपमा विकास भैरहदा हामी चाँही जहाँको त्यहीं भयौ । हवाई पुर्बाधारको निर्माण गर्दा कुन कुरालाई प्राथमिकता दिने हो त्यसमा बिचार पुर्‍याउनु पर्ने देखिन्छ । अन्य देशहरुले समुन्द्रलाई पुरेर ठुलो क्षेत्रमा आर्थिक गतिबिधिको केन्द्रको रुपमा विमानस्थललाई विस्तार गरिरहँदा हामीले चाँहि हाम्रो एकमात्र अन्तर्राष्ट्रिय विमानस्थल क्षेत्र भित्रको वारीपारी रहेको खालि घासे जमिनलाई सम्याएर पर्याप्त मात्रामा विमानहरुको लागि पार्किङ्ग स्थल समेत बनाउन सकेनौ । आजकाल पार्किङ्गस्थल नपुग भएकै कारणले विमानहरु आकासमा होल्डिङ्गमा परिरहेका छन् र पार्किङ्ग स्थल नभएर काठमाडौमा अवतरण गर्न नपाई डाईभर्ट समेत हुने गरेका छन् । यसरी आकासमा विमानहरु होल्डिङ्गमा पर्दा वायुमण्डल प्रदुषण लगायत एयरलाईन्सहरुले लाखौको घाटा व्यहोरिरहेका छन् । धावन मार्ग पुरानो भई ठुला विमानहरुको चापको कारणले बिग्रेर दिनहुँ जसो मर्मत गर्नुपर्ने र टर्मिनल भवन साँघुरो भएकोले हुने भिड्भाड्ले यात्रुहरुलाई हैरानी, ढिलाई र अस्तव्यस्तको अवस्था छ ।

हवाई पुर्वाधारमा पछि पर्नाको कारण विगतको अस्थीर सरकार, बजेटको अभाव, कर्मचारीको काम गर्ने प्रणाली, र राजनैतिक हस्तक्षेपले हो भनिन्छ । सबै संरचनाहरुको निमार्णको लागि एकै पटक काम शुरुगर्ने र सबै संरचनाहरु योजनाहरु समयमा पुरा नभई लथालिङ्ग अबस्थामा रहने गरेकाछन् । पूर्वाधारहरुको निर्माण गर्दा, कुन चाँहि सबभन्दा महत्व र जरुरीको छ त्यसमा केन्द्रित हुनुपर्दछ । जस्तै त्रिभुवन अन्तर्राष्ट्रिय विमानस्थलको लागि आजको दिनमा धावन मार्गको निर्माण र पार्किङ्ग स्थल अभाब छ भने यसमा केन्द्रित भएर बजेट बिनियोजन गर्न र तोकिएको समयमा जसरी पनि कार्य सम्पन्न गरी छाडने सामुहिक प्रतिबद्धता हुनु पर्दछ । नेपालले विमानस्थल टर्मिनल भवन निर्माण बिस्तार गर्दा सिंगापुर र दुबईको नक्कल गरेर त्यस्तै निर्माण गर्न सम्भव हुँदैन । हामिले हाम्रो देशको शीप र कलाकौशल झल्कने गरी टर्मिनल भवन बनाउनु सक्नु पर्दछ । दोश्रो अन्तर्राष्ट्रिय विमानस्थल निजगढका लागि लाखौं रुखहरु कटान गरिने छन् । हामीले यिनै रुखको काठहरु प्रयोग गरेर विमानस्थल वरिपरि पक्की र कलात्मक ढंगले पर्खाल तथा बारहरु लगाउन सकिन्छ । तिनै काठहरुको प्रयोग गरेर कलात्मक झ्याल ढोका र छाना राखेर टर्मिनल भवन बनाउन सकिन्छ । नेपालमा उपलब्ध नहुने स्टील र अन्य सामाग्री बाहिरी देशबाट झिकाएर ऋणको भारी बोकेर अर्बौं खर्च गरेर टर्मिनल भवन बनाउनु पर्ने छैन । विमानस्थलको लागि नभई नहुने पूर्वाधार भनेको उडान र अवतरणको लागि आवश्यक पर्ने बलियो पक्की धावन मार्ग र पार्किङ्ग स्थल नै हो । यति निमार्ण भैसकेपछि टर्मिनल भवन तथा आबश्यक पर्ने सेवा सुबिधाहरुको निमार्ण र बिस्तार अवश्यकता अनुसार बढाउँदै जान सकिन्छ ।

बिगतमा सरकारको सामाजिक दायित्व निर्बाह गर्नका लागि भनेर धेरै जिल्लाहरुमा विमानस्थल निमार्ण गरियो । निर्माण भै सकेका सबै आन्तरिक विमानस्थलहरुमा नियमित रुपमा विमानहरुको संचालन हुने अबस्था छैन । हालमा देश भरमा विमानस्थलहरुको संख्या ५६ वटा पुगिसकेको छ, जसमध्ये ३६ वटा मात्र संचालनमा छन् । नेपाल एयरलाइन्स लगायत निजी विमान कम्पनीहरुसंग विमानको संख्या पनि कम छ । हवाई यातायात महगो पर्ने हुनाले मोटर बाटोले जोडिएका जिल्लाहरुमा हवाई यात्रा गर्ने यात्रुहरु घटदै गएका छन् । नेपालको सन्दर्भमा ग्रामिण भेगको आर्थिक समृद्दिको लागि सडक संजालको विकास हुनै पर्दछ । यो यथार्थ हो । हवाई यातायातबाट टुवानी गर्दा महंगो पर्ने हुन्छ । त्यसैले अबका दिनमा सरकारले ग्रामिण भेगमा विमानस्थल बनाउने र त्यस पछि हवाई सेवा संचालन हुन नसक्ने अबस्थामा त्यस क्षेत्रमा लगानी गर्नुको कुनै अर्थ रहदैन । बरु अबका दिनमा प्रत्येक जिल्ला र क्षेत्रमा सुविधा सम्पन्न हेलिप्याड बनाउने र आपतकालिन अबस्थामा उद्धार तथा राहतको लागि प्रयोग गरिने हुनुपर्दछ । सोलुखुम्बुको नाम्चेसम्म सुविधा युक्त मोटर बाटो पुरयाउने हो भने धेरै संख्यामा आन्तरिक तथा बाहय पर्यटकहरुको आगमन हुने थियो । हिमाली तथा पहाडि भेगमा हवाई यात्रा गर्दा यात्रा जोखिमपुर्ण हुन्छ भन्ने सर्वसाधरणमा बुझाई रहेकोले समेत हवाई यात्रा गर्न नरुचाउने पनि सत्य हो । त्यसो त भौगोलिक रुपमा विमानहरु संचालन गर्न कठिन ठाउँहरु जस्तै लुक्ला विमानस्थल, जहाँ वरीपरि डाँडाको खोच छ । एकतर्फी एप्रोच र भिरालो सिमित धावन मार्ग छ । प्रतिकूल मौषम हुने गर्छ । त्यस्ता स्थानमा विमानस्थल संचालन भैरहदा सम्म उडान सुरक्षा र दुर्घटना हुने जोखिम भै रहने गर्दछ । सर एडमन्ड हिलारीले कुन उदेस्यले लुक्लामा धावन मार्ग बनाए, आजको दिनमा सोही

ठाउँलाई निरन्तरता दिनुपर्छ भन्ने हुदैन । सोलुखुम्बुकै अर्को फाप्लु विमानस्थललाई लुक्लाको बिकल्पमा प्रयोग गर्न सकिन्छ । फाप्लुबाट पक्कि मोटर बाटोको निर्माण गरी लुक्ला तथा नाम्चे जोडन सकिन्छ । मोटर बाटोले जोडिदैमा प्राकृतिक सुन्दरता घट्छ र वातावरण बिग्रन्छ भन्ने तर्क पनि आजको सन्दर्भमा सही छैन । समुन्द्र माथि ५०औं किलोमिटर लामो पुल हालेर एक देशबाट अर्को देशलाई जोडिएको आजको बिज्ञान प्रविधिको युगमा मोटर बाटोको बिकल्पको रुपमा केबल कारबाट पनि त जोडन सकिन्छ । मोटर बाटोले जोडिए पनि सबै खाले सवारी साधनहरुलाई प्रबेश दिनु पर्ने बाध्यता हुदैन । आर्थिक समृद्धि र पर्यटन बिस्तारको लागि सडक संजालको बिस्तार पनि हुनै पर्दछ ।

हवाई पूर्वाधार निर्माणमा आजको अवस्था :

हाल त्रिभुवन अन्तर्राष्ट्रिय विमानस्थल साघुरो भएको छ । विमानस्थलमा अर्न्तराष्ट्रिय तर्फ ९ वटा र आन्तरिक तर्फ सानाठुला खाले मिलाएर १८ वटा सम्म विमानहरु राख्न मिल्ने पार्किङ्ग स्थल छन् । एयर ट्रान्सपोर्ट क्यापासिटि इन्हेन्समेन्ट प्रोजेक्ट अर्न्तरगत एसियन विकास बैकको ऋण सहयोगमा भई रहेको त्रि.अ.बिको बिस्तार कार्यको पहिलो आयोजनाको कार्य २००९-२०१३ भित्र र दोश्रो आयोजनाको कामहरु २०१४-२०१८ सम्ममा पूरा हुनुपर्ने थियो । तर समयमा काम पुरा हुन सकेन । विमानस्थलमा आबश्यक पुर्वाधारहरुको निर्माण भएपछि मात्रै बडदो हवाई ट्राफिकको चापलाई व्यवस्थित गर्नसकिन्छ । देशमा हाल स्थायी सरकार छ । विकास निर्माणको लागि राजनितिक स्थिरता आवश्यक हुन्छ । भैरहवामा अन्तर्राष्ट्रिय उडानहरुको संचालन हुनेगरी नयाँ विमानस्थलको निर्माण द्रुत गतिमा भैरहेको छ । आजको एक बर्ष भित्रमा नै सो विमानस्थल संचालनमा आउन सक्ने देखिन्छ । पोखरामा पनि अन्तर्राष्ट्रिय विमानस्थल निर्माणको कार्य लक्ष्य अनुसार अघि बढेको छ । दोश्रो अन्तर्राष्ट्रिय विमानस्थल निजगढ, भोलिको दिनमा भूपरिवेष्ठित नेपालको हवाई यातायातको महत्व र आवश्यकतालाई समेट्ने आयोजना हो । काठमाडौ तराई द्रुत मार्गले ४ बर्ष भित्र निजगढलाई काठमाडौसंग जोड्ने छ । नेपाल अन्तर्राष्ट्रिय आर्मीले युद्धस्तरमा अन्तर्राष्ट्रिय स्तरको सडक निर्माण गरिरहेको अवस्थामा ४ बर्षभित्र निजगढ बारामा दोश्रो विमानस्थल बनाई सक्नुपर्दछ । शुरुमा धावन मार्ग तथा जहाज पार्किङ्ग स्थल लगायत कन्ट्रोल टावरको निर्माण तथा एभिएसन फ्युल, भन्सार र अध्यागमनको व्यवस्था भएमा हवाई जहाजको संचालन हुन सक्ने देखिन्छ । अन्य सेवाहरुको बिस्तार आवश्यकता अनुसार बिस्तारै गर्न सकिन्छ ।

जसरी घरमा सबै परिवारका सदस्यको मेलमिलाप, सल्लाह र सहयोग भएमा सुखि र सम्पन्न परिवार बन्दछ । त्यस्तै राज्यमा पनि सरकारलाई कर्मचारीतन्त्र, नागरिक लगायत राजनितिक पार्टीहरुको सहयोग भएमा छिटो लक्ष्य हासिल भई आर्थिक सम्बृद्धि प्राप्त हुनसक्छ । नेपालमा हवाई यातायातको विकासको लागि पूर्वाधारहरुको निर्माण गरी स्तरीय, सुरक्षित, र प्रभाबकारी रुपमा हवाई यातायातको संचालन गराउने जिम्मेवारी बोकेको नेपाल नागरिक उड्डयन प्राधिकरणले आउने दिनहरुमा बिगतको ढिलासुस्तीबाट पाठ सिकेर प्रभाबकारी रुपमा आफना कार्यक्रमहरु अगाडी बढाउनु पर्दछ । ३१ डिसेम्बर १९९८ मा स्थापना भएको प्राधिकरण २०१८, डिसेम्बरमा आइपुग्दा २० बर्ष पुरा भएको छ । के यस दुई दशकको अवधिमा पूर्वाधार निर्माणतर्फ भएका कार्यहरु सन्तोषजनक छन् ? बिगतबाट पाठ सिकेर अब अघि बढनु पर्दछ । प्राधिकरणको कार्यक्रमहरुलाई प्रभाबकारी रुपमा संचालन गराउने जिम्मा यहाँ कार्यरत कर्मचारीहरुको हो । एक हजारको हाराहारीमा स्थायी कर्मचारी भएको प्राधिकरणले कुशल रुपमा प्राधिकरणका नीति तथा कार्यक्रमहरुलाई कार्यान्वयन गराउनु पर्दछ । भ्रष्टाचार बिरुद्ध शुन्य सहनशिलताको नीति, व्यवस्थापनमा रहेका कर्मचारीको इमानदारीता, राजनितिक तह र सरकारबाट स्पष्ट निर्देशन र सहयोगको संधै अवश्यकता रहन्छ । कर्मचारीहरु बिच छिटो र गुणस्तरिय रुपमा पुर्वाधार निर्माण गर्ने सबालमा एकबद्धता हुनु पर्दछ । तोकेको जिम्मेवारी पुरा गर्न गराउन एकले अर्कोलाई सहयोग गर्ने हुनुपर्दछ । अनुशासित र योग्य कर्मचारीहरुबाट मात्रै तोकेको लक्ष्य हासिल हुन्छ । संगठन भित्रका योग्य कर्मचारीहरुको पहिचान र छनोट प्राधिकरण व्यवस्थापनले गर्न सक्नु पर्दछ र सोही अनुसारको जिम्मेवारी दिइनु पर्दछ । जुनसुकै पेशाको भएपनि दृढ ईच्छा शक्ति र केही गर्न चाहने योग्यता भएका कर्मचारीलाई कार्य गर्ने अबसर र जिम्मेवारी दिइनु पर्दछ । हाल नेपालमा राजनैतिक ठूला मुद्दाहरुको समाधान भई नयाँ संविधान लागु भई सकेको छ र नेपाल संघिय गणतन्त्रात्मक मुलुकको रुपमा अघि बढेको छ । स्थायी सरकार छ विकास र सम्बृद्धिका लागि सरकारको प्रतिबद्धता र सहयोग भइरहने अवस्था छ । यस अवस्थामा प्राधिकरणलाई भ्रष्टाचार मुक्त, पारदर्शी र जबाफदेही संगठनको रुपमा अघि बढाउनु पर्दछ । प्राधिकरणले शुरु गरेका पूर्वाधार निर्माणका कार्यलाई समयमा सम्पन्न गरेरै छोडनु पर्दछ हामीसंग अर्को बिकल्प नै छैन । यसमा सबैभन्दा बढी जिम्मेबारी प्राधिकरणमा कार्यरत जनशक्तिको हुन्छ । त्यसैले विगतको गल्तीहरुबाट पाठशिकी एक आपसमा समन्वय र सहयोगका साथ अघि बढेमा निश्चयनै हामीले चाहेको लक्ष्य हाशिल गर्ने छौं र आउने दिनहरुमा हामीले पछुताउनु पर्ने छैन ।

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Emerging Aviation Security Issues and its Nepalese Context

Man had a dream to fly in the sky as a bird. After continuous efforts of brave and wise persons, finally, the dream has come true. Air transportation has become basic need of human being these days.

As air transportation expanded, different countries of the world realized the need of a single organization that could manage all civil aviation activities. Thus, International Civil Aviation Organization (ICAO) was established as a specialized UN agency by States in 1944 for administration and governance of the Convention on International Civil Aviation. Presently, ICAO has been working with 192 Member States to ensure safe, efficient, secure, economically sustainable and environmentally responsible civil aviation.

ICAO source says annual international air passenger traffic is expected to reach 6 billion by 2030 from about 3.3 billion today, while air cargo transport is expected to increase to 125 million tons from 50 million. It seems that the air transportation has been growing rapidly. The effect of growth of civil aviation in various sectors such as trade, tourism, political and cultural activities has made the scenario very complex.

Along with growth and complexity of civil aviation, there are high chances of increasing threat level and that requires advance security system. Despite enhancements to the security system, terrorists continue to view civil aviation as an attractive target and continue to exploit vulnerabilities in civil aviation system, with the aim of causing substantial loss of life, economic damage and disruption to connectivity and trade between States. To draw a sensitive picture of aviation security, ICAO has identified global risk context of increasing threat level as:

a) sixty-nine acts of unlawful interference were recorded between 2011 and 2016.

b) attempts to attack civil aviation and airport infrastructure with improvised explosive devices (or IEDs) and person-borne IEDs continue to pose a significant threat.

c) attacks on the landside areas of airports have been growing to locations where members of the public and passengers circulate at predictable times.

Considering the global risk context statement (RCS), all member states also should analyze, identify and develop local risk context statement of the country and strengthen aviation security system accordingly.

In September 2016, at the 39th Session of Assembly, the International Civil Aviation Organization (ICAO) realized the need of Global Aviation Security Plan (GASeP) as a future aviation security policy and programming framework to cope with emerging challenges of States and industry. GASeP has been already applied in some member States for effective implementation of Standard and Recommendation Practices (SARP). Nepal also should take benefits of the plan by adapting it. Action plan should be developed in accordance with GASeP framework and guidelines and implemented accordingly. GASeP provides the foundation for States, industry, stakeholders and ICAO in enhancing aviation security worldwide and achieving five key priority outcomes, namely;

a) enhance risk awareness and response;

b) develop security culture and human capability;

c) improve technological resources and innovation;

d) improve oversight and quality assurance; and

e) increase cooperation and support.

Security oversight is needed to identify actual aviation security status of the country. It also enables States to ensure the effective implementation of security-related Standards and Recommended Practices (SARPs). There are eight critical elements for aviation security oversight system. These encompass the whole spectrum of civil aviation security activities. The critical elements are:

CE-1 : Aviation Security Legislation
CE-2 : Aviation Security Programmes and Regulations
CE-3 : State Appropriate Authority for Aviation Security and its Responsibilities
CE-4 : Personnel Qualifications and Training
CE-5 : Provision of Technical Guidance, Tools and Security Critical Information
CE-6 : Certification and Approval Obligations
CE-7 : Quality Control Obligations

CE-8 : Resolution of Security Concerns

ICAO has also fixed global targets of aviation security for its member States. By 2020, effective implementation (EI) of 80% states should reach above 65%, by 2023 effective implementation (EI) of 90% of States reach above 80% and finally by 2030 EI of 100% of States should reach above 90%. Various protocol questions (PQs) concerned with eight critical elements have been set by ICAO and given weightage for each question to calculate effective implementation. Thus, it has become necessary to review existing Aviation Security System of Nepal to meet global targets of aviation security as set by ICAO. To overcome the problem or to mitigate gap between ICAO target and actual scenario of Nepalese aviation security, it is urgent to initiate short term and long term corrective measures.

Aviation security is one of the means to ensure the safety of our flight to the destination. Different modality or structures of aviation security are established and practiced in different countries as per their requirement and nature of the states. In some countries aviation security function are carried by government agency, in some country the system has been managed by private security agency while in some countries it has been jointly done by government and private security agency. A state is free to apply any security modality and discharge aviation security responsibility through any agency as per state structure, rules and regulation of the States.

In Japan, air carriers conduct screening function of aviation security. Guarding and patrolling of airport terminal, surrounding area, handling the matters of bomb threat and hijack are done by National Police. Regulated agent manages security measures for air cargo. Training and certification of screeners and instructor are done by an autonomous entity i.e. Aviation Security Business Centre (ASBC). Japan Civil Aviation Bureau (JCAB) under Ministry of Land, Infrastructure, Transport and Tourism (MLIT) develops rules, regulation, policies, coordinate among relevant agencies and conducts inspection. JCAB is appropriate security agency for aviation security of the State.

Presently, acts of policy formulation, documentation, regulation, training and arrangement of security equipment and infrastructure are done by Civil Aviation Authority and Civil Aviation Office. Internal security of the airport is done by Nepal Police whereas external security is handled by Nepal Army and or Armed Police Force. Security activities such as access control, screening, guarding, patrolling are done by Nepal Police. In some airport, Nepal Army is taking responsibility of external security and in some airport Armed Police Force are deployed for external security. Aviation security responsibility is assigned to different agencies in Civil Aviation Security Rule, 2016 and National Civil Aviation Security Program of Nepal (Fifth Edition 2018).

Even though committees like National Aviation Security Committee (NCASC) and Airport Security Committee (ASC) are provisioned in documents, rules and regulation to coordinate among different government and private agencies. Documentation part is almost perfect but in implementation part, there are some issues that should be resolved. Some questions or serious issues are always raised in aviation security audit that chain of command may not work effectively, NCASC meeting may not held as and when required, Nepal police deployed at airport may not obey the instruction given by civil aviation security personnel, etc.

Next case, almost all Nepal police deployed in airport are given training and after some time they are transferred outside of airport and there is always issue regarding lack of training to Nepal Police. Higher level of decision has been made to establish separate wing under Nepal Police but not materialized yet. There is similar situation within Civil Aviation Authority of Nepal. There is a separate unit under it but not a separate group or subgroup dedicated to take over responsibility of aviation security. A lot of budget has been spent in human resource, equipment, infrastructure, documents, etc. but there is no significant result achieved in this area. It is, therefore, urgent to consider seriously on this matter by the management.

Nepal has experienced first cycle audit in 2006 and second cycle audit in 2010 conducted by ICAO under Universal Aviation Security Audit Program. During the time there was adequate number well experienced employees almost competent as ICAO Expert. The case is different now. ICAO, then, changed modality of audit as Universal Aviation Security Audit Program - Continuous Monitoring Approach (USAP-CMA). Aviation security scenario was not that much complex like of these days. Due to some reasons, other neighboring countries that were behind Nepal or in initial stage have done a lot of progress in aviation security. Thus, Nepal should give high priority for aviation security in the days to come to march ahead in comparison to other countries.

Nepal has just got relief from the stress suffered from Significant Safety Concern (SSC) issued by ICAO. Before starting audit, thus, well preparation is required, so that no significant security concern (SSeC) will be bored. Documentation and organization parts could be at acceptable level but most of the developing countries like Nepal generally suffer from lacking effective implementation at airport level. Inadequate access control measures to Security Restricted Areas (SRAs); deficiencies in the implementation of airport

personnel identification and vehicle pass systems; lack of airport-level human and technical resources for aviation security; ineffective screening and security controls of non-passengers being granted access to the SRA such other deficiencies are identified in auditing process.

If there is plan of ICAO to conduct a recent aviation security audit of Nepal, in short term, to face the audit, an Action Team should be formed immediately in coordination of aviation security department of CAAN involving members from TIACAO, Civil Aviation Academy and Aircraft Operators. The team should receive protocol questionnaires (PQs) from ICAO, study and analyze them and make necessary arrangement to face the audit. Technical assistance can be taken from Cooperative Aviation Security Program Asia Pacific (CASP AP) or ICAO and also advice can be taken from available ICAO experts. ICAO may also provide technical assistance for auditing purpose through Combine Action Team (CAT) mission but member States should request ICAO well in advance.

In long term, a model can be - there should be structural change in organization and change of existing regulation to adapt appropriate model aviation security for Nepal. A separate wing under Nepal Police can be established for airport police like traffic police and some incentive should be given to them to maintain chain of command with civil aviation security personnel. There is a separate unit within CAAN and in addition to that separate group and sub group should also be created having career opportunity.

As another model - airport police should conduct guarding and patrolling, involve in bomb threat and hijacking and inspection of terminal building and around, and conduct general security. Private party or security personnel deputed under section 21 of Civil Aviation Authority Act, 2053 should involve in access control & screening. Provision of NCASP relating to air cargo should be implemented through regulated agent (RA). Security Department of CAAN should works as regulator and also develops rules & policies.

The issue of splitting CAAN as a regulator and a service provider being hot cake and new Nepal Civil Aviation Act, 2017 (Draft) being under final phase of governmental approval, provisions mentioned in Chapter 8 of the ACT seem insufficient and unclear. It is, therefore, right time to consider aviation security system modality of the other States and improve the Act in line with provisions of Security (Annex 17) and Aviation Security Manual (Doc 8973- Restricted).

Finally, aviation security is business of international characteristics and any lapses in aviation security of the country can affect aviation security system of another country of the world. Improving security system is a never ending process. Thus, whether there is an audit case of ICAO or not, aviation security system should be continuously reviewed, modified and improved to strengthen the security system and cope with emerging local and or global threat of unlawful acts.

Source

ICAO official website
Global Aviation Security Plan, 2017
Civil Aviation Security Rules, 2016
National Civil Aviation Security Program of Nepal (Fifth Edition 2018)
Civil Aviation Authority Act,1996
Nepal Civil Aviation Act, 2017 (Draft)

ट्रेड युनियन: सिद्धान्त, आवश्यकता र अभ्यास

देबेन्द्र प्रसाद पाण्डेय
प्रबन्धक, ने.ना.उ.प्रा.

ऐतिहासिक पृष्ठभूमी :

अठारौं शताब्दिमा वेलायतबाट शुरु भएको औद्योगीक क्रान्तिले ल्याएका विभिन्न असरहरु मध्ये पुँजीवादको विकासले पुँजीवादी अर्थव्यवस्था अन्तर्गत उद्योगहरुमा पुँजीपति वर्गबाट उच्च मुनाफा आर्जनका लागि आफ्नो मिलमा कार्यरत मजदुरको श्रम माथि अत्यधिक शोषण हुन थाल्यो । मजदुरहरुले कलकारखानामा पसिना काढेर मालसामान तयार गर्ने तर तिनको जीवन निर्वाहको लागि पर्याप्त मजदुरी प्राप्त नहुने अवस्थाले गर्दा बाध्य भएर मजदुरहरु उचित मजदुरी आफ्नो कार्यथलोबाटै प्राप्त गर्न संगठित भै मालिक वर्गलाई दबाव दिने यहां सम्म कि मिलका मेशिनहरु नै तोडफोड गर्ने सम्मका क्रियाकलापहरु गर्न थाले । पछि जब सरकारले मेशिन तोडफोड गर्ने मजदुरलाई मृत्युदण्ड दिने कानुन वनायो तब मजदुरहरुले मिल मालिक कहां र त्यहांको पार्लियामेण्टमा दरखास्त मार्फत विरोध गर्ने नयां तरिकाको शुरुवात गरे र पार्लियामेण्टले पनि मजदुरहरुको दुःख निवारणका लागि धेरै प्रकारका फ्याक्ट्री एक्टहरु पास गर्‌यो । तर त्यसको कार्यान्वयन गर्ने मेजिष्ट्रेट पनि मिल मालिक वर्गकै व्यक्ति हुने भएकोले एक्टको मक्सद वमोजिम कार्यान्वयन हुन सकेन र कार्यान्वयन नगर्ने माथि कुनै प्रकारको कारवाहीको व्यवस्था गरिएको थिएन । त्यसपछि मजदुरहरुले त्यहांको पार्लियामेण्टको चुनावमा आफुहरु ले पनि मत दिने अधिकार प्राप्त गरि कानुन वनाउने निकायमा दवाव पारि वहुसंख्यक मजदुरवर्गको हित गर्ने सरकार वनाउने उद्धेश्यका लागि विभिन्न उपयोगी पाँच वटा माग राखि चर्चिष्ट आन्दोलन (Chartist Movement) शुरु गरे जसका धेरैजसो मागहरुलाई स्वीकारिएको भएता पनि व्यवहारमा त्यत्ति लागु हुन नसक्दा अन्ततः मजदुरहरुले आफ्नो हितको रक्षार्थ समान स्वार्थ भएका र देशव्यापीरुपमा छरिएर रहेका सम्पुर्ण मजदुरहरुलाई संगठीत पारि औपचारिकरुपमा मजदुर संघ (ट्रेड यूनियन) वनाई त्यसै मार्फत आफ्ना हकहितको संरक्षण गर्ने विचार गरे । तत्कालिन समयमा मजदुर संघ वनाउन नदिने गरि राज्यबाट धेरै प्रकारका प्रतिवन्धहरु लगाईएका भएता पनि अन्ततः सन् १८२२ मा वेलायतमा सर्वप्रथम मजदुर संघ (ट्रेड यूनियन) को जन्म भयो । विश्व इतिहासमा यस पृष्ठभूमीबाट ट्रेड यूनियनको शुरुवात भएको पाइन्छ ।

ट्रेड यूनियन सिद्धान्त :

अर्थ : मानिसले आफ्नो जीवन निर्वाह गर्ने क्रममा अर्थोपार्जनका लागि विभिन्न पेशा व्यवसायहरुः उद्योग, व्यापार, नोकरी आदी अपनाउने गरेको हुन्छ । जुनसुकै पेशा व्यवसायमा एउटा पक्ष रोजगारदाता, मालिक, पुजिपति, उद्योगी, व्यापारी अथवा सरकार (रोजगारदाताकोरुपमा हेर्दा) रहेको हुन्छ भने अर्को पक्ष त्यस उद्योग, व्यापार अथवा सरकारको काम गर्ने रोजगार प्राप्त गर्ने मजदुर, श्रमिक, कामदार अथवा कर्मचारी रहेको हुन्छ । मालिकले आफ्नो पुँजी लगाई व्यवसाय स्थापना गर्दछ र त्यसबाट अधिकतम नाफाको चाहना राखेको हुन्छ भने श्रमिक वर्गसंग उसको पुँजीकोरुपमा श्रम रहेको हुन्छ र उसले आफ्नो श्रम वेचेर प्राप्त तलव, ज्याला वा मजदुरीबाट जीवन निर्वाह गर्नुपर्ने हुन्छ । व्यवहारगतरुपमा हेर्दा मालिकले आफ्नो व्यवसायबाट बढि भन्दा बढि नाफाको अपेक्षा गर्दछ जसको लागि उसले कार्यरत कामदारलाई कम भन्दा कम पारिश्रमिक दिन खोज्छ भने अर्को तिर मजदुरहरुले आफुले श्रम बिक्रि गरेर सहज जीवन निर्वाहका लागि बढि भन्दा बढि मौद्रिक तथा गैह्र मौद्रिक सुविधाको अपेक्षा राख्दछ । यसरी रोजगारदाता र रोजगारप्राप्त गर्ने पक्षहरुको विपरित रुचिका विचमा श्रमिकले सहजैरुपमा आफ्नो श्रमको मूल्य वरावरको ज्याला प्राप्त गर्न कठिन हुने अवस्था सिर्जना हुने हुदा श्रमिकहरु आफ्नो वर्गिय तथा पेशागत सामुहिक हकहितकालागि संगठित हुने र रोजगारदाता कहां दवाव सिर्जना गर्ने कार्य गर्दछन् । सिद्धान्ततः त्यस्तो प्रकारको मजदुरहरुको औपचारिक संगठन नै ट्रेड यूनियन हो । अर्थात अर्को शब्दमा भन्दा निजी तथा सार्वजनिक उद्योग, व्यापार अथवा सरकारको कामगर्ने मजदुर, श्रमिक, कामदार अथवा कर्मचारीहरुको आफ्नो वर्गिय तथा पेशागत हकहितको संरक्षण र सम्वर्धन गर्नकालागि औपचारिक रुपमा संगठित समुह वा संस्थालाई ट्रेड यूनियन भनिन्छ ।

प्रकृति : ट्रेड यूनियनको प्रकृतिलाई हेर्दा यो एक औपचारिक रुपमा संगठित तथा अविच्छिन्न उत्तराधिकारवाला स्वशासित संगठन हो । यसले स्वहित निर्दिष्ट कार्यहरु गर्दै साझा स्वार्थ र उद्धेश्य पूर्तिका लागि क्रियाशिल रहन्छ । ट्रेड यूनियनको सदस्यता बाध्यकारी नभै स्वेच्छिक हुन्छ । ट्रेड यूनियनका गतिविधिहरु राजनितिक कार्योन्मुख अथवा राजनितिक प्रकृतिको हुन्छ र यसले आफ्नो वर्गिय र पेशागत हित संरक्षणको दायरासम्म मात्र कार्य गर्दछ तर यो पुर्णरुपमा राष्ट्रिय राजनितिक संस्था होईन । ट्रेड यूनियनले आफ्नो पेशागत वर्गीय र सामुहिक हकहितका लागि क्रियाशिल रहने क्रममा यसले आफ्ना कुनै पनि सदस्यलाई रोजगारदाताको कुनै व्यवस्थापकिय पदमा वहाल नगराई व्यवस्थापन पक्षका निर्णयहरु, नीतिहरुलाई आफ्नो वर्गीय र पेशागत हितका पक्षमा गराउन वा प्रभावित गर्न प्रयत्नशिल रहन्छन् । त्यसैले यो औपचारिक समुह आफैमा एउटा समग्र श्रमिक,

कामदार तथा कर्मचारीहरुको सामूहिक आवाज अथवा उद्घोष हो।

कार्यहरु तथा अधिकारहरु:

ट्रेड यूनियनका कार्यहरुलाई हेर्दा मूख्य रुपमा आफ्ना सदस्यहरुको सामूहिक हित अभिबृद्धि गर्ने खालका मागहरु आवधिकरुपमा प्रस्तुत गर्ने र ति मागहरु पुरा गराउन प्रयत्नशील रहने, आफ्ना गतिविधिहरुका साथै व्यवस्थापनका निर्णयहरुको आम कर्मचारी माझ प्रचार प्रसार गर्ने, निर्वाचनका गतिविधिहरु संचालन गरि मजदुर अगुवाहरु चुन्ने, सम्पुर्ण श्रमिकहरु तथा व्यवस्थापनका बिच सम्पर्क स्थापित गर्ने, राजनितिक लविङ (Political Lobbing) गर्ने, व्यवस्थापनको नीति निर्णयहरुलाई श्रमिकको पक्षमा र संस्थाको विकासको पक्षमा ल्याउनका लागि सिर्जनात्मकरुपमा विरोधका कार्यक्रम सञ्चालन गर्ने तथा आन्दोलन गर्ने, श्रमिक वर्गका सामूहिक पिरमर्का समाधानका लागि प्रयत्नरत रहने, सामूहिक सौदावाजी गर्ने र जनमत निर्माण गर्ने गराउने आदि कार्यहरु ट्रेड यूनियनका कार्यहरु हुन । त्यस्तै विश्वव्यापीरुपमा संगठित हुने अधिकार, सामुहिक सौदाबाजी गर्ने अधिकार र हड्ताल गर्ने अधिकार जस्ता बिषयरु मुख्यरुपमा ट्रेड यूनियन अधिकारको रुपमा स्थापित भएको पाईन्छ।

सामुहिक सौदाबाजी:

संगठनको मुख्य व्यवस्थापक (अन्तिम निर्णयकर्ता) र कार्यरत कामदार अथवा कर्मचारीहरुका बिच सामूहिक विवाद समाधान गर्नका लागि सामूहिक छलफलको माध्यमबाट निरुपण गर्ने प्रकृयालाई सामूहिक सौदाबाजी भनिन्छ। यो एक सामूहिक सरोकारका बिषयहरुमा ब्यवस्थापन पक्ष र ट्रेड युनियन प्रतिनिधिहरु बीच हुने समुहगत प्रकृया तथा दुईपक्षिय वार्तालाप पद्धति हो। संगठनमा श्रमिकहरुको कार्य अवस्था निर्धारण गर्न, रोजगारीका शर्तहरु निर्धारण गर्न, रोजगारदाता तथा तिनका संगठनहरु र श्रमिक तथा तिनका संगठनहरुबीचको सम्बन्धलाई नियमित गर्नका लागि सामुहिक सौदाबाजी को प्रयोग गरिन्छ। यसको सफल अभ्यासका लागि कामदार वा कर्मचारीहरुको ट्रेड यूनियन अधिकार स्थापित भएको हुनुपर्ने, बलियो र व्यवस्थीत यूनियन हुनुपर्ने, उपयुक्त राजनितिक वातावरण र संस्थागत संरचना हुनुपर्ने, दुईपक्षहरुका बीचमा आपसी विश्वास मजवुत हुनुका साथै एकआपसमा निर्भरता स्वीकार तथा सुचनाको आदानप्रदान हुनुपर्ने जस्ता व्यवस्थाहरु तथा अवस्था कायम रहेको हुनुपर्दछ। नयां व्यवस्थापकिय अवधारणा अन्तर्गत सामुहिक सौदाबाजीलाई व्यवस्थापनको एउटा पद्धतिको रुपमा समेत लिने गरेको पाईन्छ।

अन्तर्राष्ट्रिय श्रम संगठन :

विश्वभरिका कामदारहरुको सामाजिक न्यायलाई प्रोत्साहित गर्ने तथा श्रमिकहरुको आर्थिक र सामाजिक सुरक्षा प्रदान गर्ने खालका श्रम कानुनहरु पारित गर्ने मुख्य उद्धेश्यका साथ सन् १९१९ अप्रिल १४ मा स्थापित भै १४ डिसेम्वर १९४६ मा संयूक्त राष्ट्र संघको महासभाबाट अनुमोदित यस संयूक्त राष्ट्र संघको बिशिष्टिकृत संस्थाका हाल १९१ राष्ट्रहरु सदस्यको रुपमा रहेका छन्। नेपालले १६ डिसेम्वर १९५५ (तद्नुसार वि.सं. २०१२ पौष १) मा यस संस्थाको सदस्यता प्राप्त गरेको थियो । यस संगठनको विधान अनुसारः सवैका लागि पुर्ण रोजगारिको अवसर प्रदान गरि जिवनस्तर उत्थान गर्नु, न्यूनतम ज्याला मजदुरीको स्तर निर्धारण गर्नु, सामुहिक सौदावाजीलाई प्रोत्साहित गर्नु, कामदारहरुको सामाजिक सुरक्षाको व्यवस्था मिलाउनु, बाल कल्याणको व्यवस्था गर्नु, कामदारहरुका लागि आवास, मनोरञ्जन आदिको व्यवस्था मिलाउनु, रोजगार तथा शिक्षाको समान अवसर दिलाउने व्यवस्था गर्नु आदि उद्धेश्यहरु रहेका छन्।

अन्तर्राष्ट्रिय श्रम संगठनद्वारा पारित सुझावहरु (Recommendations) श्रम व्यवस्थापन सम्बन्धी राष्ट्रिय नीति, कानून र व्यवहारको लागि मार्गदर्शकको रुपमा रहन्छन् । संगठनद्वारा निर्मित सन्धिहरुलाई अनुमोदन गर्ने सदस्य राष्ट्रहरुका लागि ती सन्धिहरु बाध्यकारी हुन्छन् र ती सन्धिका व्यवस्थाहरु आ आफ्नो राष्ट्रमा लागू गर्नु सदस्य राष्ट्रको कर्तव्य हुन्छ। अनुमोदन गर्ने राष्ट्रद्वारा सन्धिको कार्यान्वयन भए नभएको रेखदेख संगठनले गर्दछ साथै ट्रेड यूनियनका अधिकारहरुको उल्लंघन सम्बन्धी शिकायतहरुको जांच गर्ने छुट्टै प्रकृया रहेको छ। यस संगठनले हालसम्म १८१ भन्दा बढी सन्धिहरु र १८८ भन्दा बढी सुझावहरु पारित गरेको छ र यस्ता सन्धि तथा सुझावहरुलाई अन्तर्राष्ट्रिय श्रम संहिता भन्ने गरिन्छ।

कर्मचारीतन्त्र:

सार्वजनिक क्षेत्रमा कर्मचारीहरुद्वारा संचालित शासन प्रणालीलाई कर्मचारीतन्त्र भनिन्छ । राज्य व्यवस्था संचालनको क्रममा जनप्रतिनिधीहरुबाट जनआकांक्षा बमोजीमको नीति निर्धारण हुने र कर्मचारीतन्त्रबाट कार्यान्वयन हुने हुँदा कर्मचारीतन्त्र स्वतन्त्र, निश्पक्ष, राजनितिक तटस्थ, योग्य, व्यवसायीक तथा दक्ष रहनुपर्ने अपेक्षा गरिएको हुन्छ। कर्मचारीतन्त्रबाट गरिएको अपेक्षा भन्दा अन्यथा भएमा जनताले यथोचितरुपमा राज्यबाट स्वतन्त्र र निश्पक्ष सेवा प्राप्त गर्न सक्दैनन्, सुशासन कायम रहन सक्दैन र फलतः सरकारको विश्वशनियता, लोकप्रियता र अवधिमा प्रश्न चिन्ह आउन सक्छ। कर्मचारीतन्त्रका प्रणेता म्याक्स वेबरको कर्मचारीतन्त्रको सिद्धान्तमा निजामति कर्मचारीतन्त्र राजनितिकरुपमा निश्पक्ष र तटस्थ तथा पेशागतरुपमा दक्ष हुनुपर्ने विषय नै मुख्यरुपमा उल्लेख छ।

नेपालमा ट्रेड यूनियन र सामुहिक सौदाबाजी :

नेपालमा सर्वप्रथम सन् १९४६ मा अखिल नेपाल ट्रेड यूनियन कांग्रेसको स्थापना र सन् १९४७ मा विराटनगरमा मजदुर यूनियनको गठन संगै ट्रेड यूनियनको इतिहास शुरुवात भएको पाईन्छ। हाल आएर ट्रेड यूनियन अधिकार र यसको प्रयोग सम्बन्धमा नेपालमा विभिन्न ऐन कानुनहरु मार्फत यस्तो अधिकारको प्रत्याभुत गरिएको छ। नेपालको संविधान, २०७२ मा मौलिक हक अन्तर्गत प्रत्येक नागरिकलाई संघ र संस्था खोल्ने स्वतन्त्रताको हक हुने र प्रत्येक श्रमिकलाई उचित श्रम अभ्यासको हक हुने र प्रत्येक श्रमिकलाई कानून बमोजिम ट्रेड युनियन खोल्ने, त्यसमा सहभागी हुने तथा सामूहिक सौदाबाजी गर्न पाउने हक हुने व्यवस्था रहेको छ। यस्तो

संविधान प्रदत्त हकलाई श्रम ऐन २०४८ तथा ट्रेड यूनियन ऐन २०४९ मार्फत परिभाषित र व्यवस्थीत गरिएको छ । सार्वजनिक क्षेत्रमा कार्यरत निजामति कर्मचारीहरुका लागि निजामती सेवा ऐन र नियमावलीमा टेड् यूनियन तथा श्रम अधिकारको कानुनी व्यवस्था रहेको छ भने यीनै ऐन, नियमहरुमा आधारीतभै विभिन्न सार्वजनिक संस्थानहरुका (प्रतिष्ठानहरुका) कर्मचारी सेवा र शर्त सम्बन्धी नियमावली तथा विनियमावलीहरुमा ट्रेड युनियन अधिकार सम्बन्धी व्यवस्थाहरु गरिएको पाईन्छ ।

ट्रेड यूनियनको मुख्य अधिकार अन्तर्गत सामुहिक सौदाबाजी हुने भएकोले नेपालमा पनि यसका केही कानुनी मान्यताहरु स्थापित भएका छन् । श्रम ऐनमा कामदार वा कर्मचारी तथा व्यवस्थापकको बीचमा उत्पन्न विवादको टुङ्गो लगाउन गरिएको संझौता श्रम कार्यालयमा दर्ता भएपछि सम्बन्धित पक्षहरुको लागि कानुन सरह मान्य हुने, त्यस्तो संझौता मिति तोकिएकोमा सोही मितिबाट र नतोकिएकोमा श्रम कार्यालयमा दर्ता भएका मितिबाट लागु हुने, लागु भएपछि दुईबर्षसम्म संझौतामा उल्लेखित व्यवस्थाहरुको सम्बन्धमा पुःन माग राख्न नपाइने, सामुहिक सम्झौताको कार्यान्वयन नभएमा सम्बन्धित पक्षले श्रम कार्यालयमा उजुरी दिन सक्ने र श्रम कार्यालयमा कानून बमोजिमको प्रकृयाबाट लागू गराउने व्यवस्था रहेकोछ ।

ट्रेड यूनियन अभ्यासका चुनौती र निराकरण:

नेपालको संविधान, २०७२ तथा अन्य प्रचलित श्रम कानुनहरुले प्रत्याभुत गरेको ट्रेड यूनियन अधिकारको अभ्यासमा केही चुनौतीहरु विद्यमान रहेको पाईन्छ । जस्तै, सामुहिक सौदाबाजीको मान्यता र बिषयगत ऐन नियमको प्रकृया विपरित वा व्यवस्थापकको अधिकार क्षेत्र बाहिरको विषयमा समेत व्यवस्थापन समक्ष माग प्रस्तुत हुने र माग संस्थागत नहुँदै विरोधका कार्यक्रम आउने, व्यक्तिगत स्वार्थतर्फ यूनियन कर्मिहरु उद्यत रहने, ट्रेड यूनियनहरु राजनितीक दलका भातृसंस्थाको रुपमा विकसित बन्दै गई रहेकोले कर्मचारीतन्त्रको अपेक्षित स्वतन्त्र, स्वच्छ र निश्पक्ष छवि कायम हुन नसक्ने परि स्थिती सिर्जना हुने, प्रतिष्ठानस्तरमा अनपेक्षितरुपमा बढि संख्यामा ट्रेड यूनियनहरु गठन भई क्रियाशिल रहने, व्यवस्थापन पक्षमा खासगरि सत्तासिन दल निकट यूनियनको दवावमा मात्रै अग्रसरता हुने अन्यथा उदासिन रहने प्रबृत्ति, ट्रेड यूनियनका पदाधिकारीहरु अधिक संख्यामा रहने गर्दा संस्थाको कार्यसम्पादनमा असर, यूनियन कर्मिहरुमा ट्रेड यूनियन सम्बन्धी सैद्धान्तिक तथा व्यवहारिक ज्ञानको अभाव र रोजगारदाता वा व्यवस्थापन पक्षबाट समेत यूनियनहरुलाई सधैंभरि विरोधी वा प्रतिद्वन्दिको रुपमा लिने, रचनात्मक विरोधि र सहयात्रीको रुपमा स्वीकार गर्न नसकेको अवस्था, व्यवस्थापनमा ट्रेड युनियनहरुको अत्याधिक र अवाञ्छित प्रभाव रहेका कारण कर्मचारी, श्रमिकले अमुक ट्रेड यूनियन सँग आवद्ध नहुदा एक्लो महशुश गर्ने र रोजगारीको हक हित सुरक्षाका लागि समेत अमुक युनियनको निकट बन्नुपर्ने र संस्थामा व्यवस्थापन भन्दा ट्रेड यूनियनहरुको प्रभाव ठुलो रहने भै व्यवस्थापकिय सिद्धान्तमा संस्था संचालनमा असजिलो परिरहेको अवस्था विद्यमान रहेको, ट्रेड यूनियन कर्मिहरुमा एक प्रकारको दम्भ उत्पन्न हुने र व्यक्तिगत लाभोन्मुख प्रवृत्ति बढ्दै जाने तथा राजनैतिक हस्तक्षेपमा अधिकांश दैनिक व्यवस्थापकिय निर्णयहरु लिईने हुँदा व्यक्तिगत वा एकल समुहगत स्वार्थ पूर्तितर्फ संस्थाका क्रियाकलापहरु उद्यत रहने र राजनितिक नेतृत्व समेत फसिरहेको अवस्थाका कारण अन्तत जनतालाई पुर्‍याउने सेवामा ह्रास हुने, व्यवस्थापन र ट्रेड यूनियनका केही मुठ्ठीभर राजनैतिक शक्ति निकट व्यक्ति तथा समूह मिली आम संस्थाको हित प्रतिकुल कार्य हुने र निजी क्षेत्रका श्रमजीवी मजदुर श्रमिक र सरकारी सेवाका श्रेणी बिहिन देखि शाखा अधिकृत वा तह एक देखि तह दशसम्मका कर्मचारीलाई समान ट्रेड यूनियन अधिकार रहेकोमा सरकारी सेवाको निश्चित पदाधिकारी वा निजी क्षेत्रका मिलहरुमा काम गर्ने श्रमिकको सोचाईको स्तर र सामाजिक मर्यादा समान हुन नसक्ने हुदा कानुनी असमताका कारण ट्रेड यूनियन कर्मिहरु माझ उचित सामञ्जस्य कायम हुन नसकेको जस्ता समस्या तथा चुनौतीहरु विद्यमान रहेका छन ।

सार्वजनिक नीति तथा कार्यक्रमहरु सार्वजनिक सेवामा कार्यरत कर्मचारीहरु मार्फत कार्यान्वयन हुने हुँदा स्वतन्त्र र निस्पक्ष कर्मचारीतन्त्र अपेक्षित हुन्छ भने निजी क्षेत्रका औद्योगीक, व्यवसायीक संस्थाहरुमा कार्यरत कर्मचारी, कामदारहरुबाट संस्थाको उद्धेश्य अनुरुप इमानदारिता र व्यवसायीकता अपेक्षित हुने हुँदा सार्वजनिक तथा निजी क्षेत्रका जनशक्तिहरुका विचमा राजनीतिक आस्थाका आधारमा चिरा पर्नु कुनैपनि अर्थमा लाभदायक नहुने हुँदा संविधान प्रदत्त संगठित हुने श्रम अधिकारको उपयोगका क्रममा राजनीतिक वादका आधारमा पृथक ट्रेड यूनियन खोल्ने प्रवृत्तिलाई निरुत्साहित गर्न र पेशागत हकहितका लागि एकल आधिकारिक ट्रेड युनियन मार्फत सामुहिक सौदावाजीको अधिकारको उपयोग गरिनु सान्दर्भिक हुने देखिन्छ ।

साथै यस क्षेत्रमा विद्यमान चुनौतिहरुको निराकरणका लागि श्रमिकको पृथक पृथकरुपले परिभाषित गरि ट्रेड यूनियन कर्मिहरुको योग्यता, अनुभव, कार्यसमिति सदस्य संख्या र पदावधि तोकि सोही बमोजिमको ट्रेड यूनियन अधिकारको व्यवस्था हुनुपर्ने; कर्मचारी, श्रमिक वा कामदारहरुको लगायत समग्र संस्थाको हित संरक्षणका खातिर आवश्यक पर्ने संगठित आवाज र रचनात्मक बिरोधका लागि एकल ट्रेड यूनियन पर्याप्त हुने हुँदा राजनीतिक वाद मुक्त स्वतन्त्र ट्रेड यूनियनको बिकासलाई प्रोत्साहन हुनुपर्ने; निर्वाचित आधिकारिक ट्रेड यूनियन पदाधिकारीहरुलाई सामाजिक सौदाबाजी र सामाजिक सम्वाद सम्बन्धी तालिम सिप ज्ञान तथा क्षमता बिकासको अवसर प्रदान हुनुपर्ने; ट्रेड यूनियन सम्बन्धी व्यवस्थापनको दृष्टिकोण र सामाजिक सौदाबाजी सम्बन्धी बुझाईमा देखिएको भिन्नतालाई ट्रेड यूनियन शिक्षाको माध्यमबाट सकारात्मक तथा रचनात्मक बनाईनु पर्ने; श्रम विवाद सहजकर्ता (श्रम विभाग) मार्फत ट्रेड यूनियन सम्बन्धी निरन्तर शिक्षा, जनचेतना तथा तालिम कार्यक्रमहरु संचालन गरिनु पर्ने जस्ता उपायहरुको अवलम्वन हुन आवश्यक देखिन्छ ।

Bishnu Gautam
Manager, CAAN

Smart Airport

Introduction

Smart Airport is a concept which is defining new technologies in matters of airport operation, passenger services and economical medium for cargo by respecting aeronautical safety and security elements. The main functions are the airport operation, infrastructures, checkpoints, passengers-luggage-cargo control system, info points and internal communications of the airports and also smart connections with technologies.

A large airport typically has dozens of automation systems that require automatic information interchange among them to ensure safe and efficient airport operations. However, those systems were often developed by different vendors and were not designed to be interoperable which makes systems integration a very complicated matter. Ad hoc point-to-point integration often proves to be problematic. An integration framework is needed to avoid spaghetti of integration. It requires a sophisticated integration framework for defining the integration information requirements and designing the systems integration architecture.

As air traffic grows, airports need to adapt to the requirements and to become more entrepreneurial and proactive to changing aviation dynamics. Most of the airports, nowadays are considered multi-nodal transportation hubs for people, information and trade.

The goal of a smart airport is to make systems and processes digitally aware, interconnected, infused with intelligence and simple to be accessed by everybody. Predicting capacity demand, providing enhanced passenger travel experience, improving operational process efficiency, improving staff productivity and ensuring security and safety are just a few of the smart airport targets.

The main idea is to create an integrated system, unified and ready-to-use digital platform for the airports to become informed and intelligent. The airports are currently implementing isolated solutions based on the concept of a smart airport. But working on individual solutions will not lead to a smart airport, all the implemented concepts should be designed to be introduced in the unified system of the smart airport.

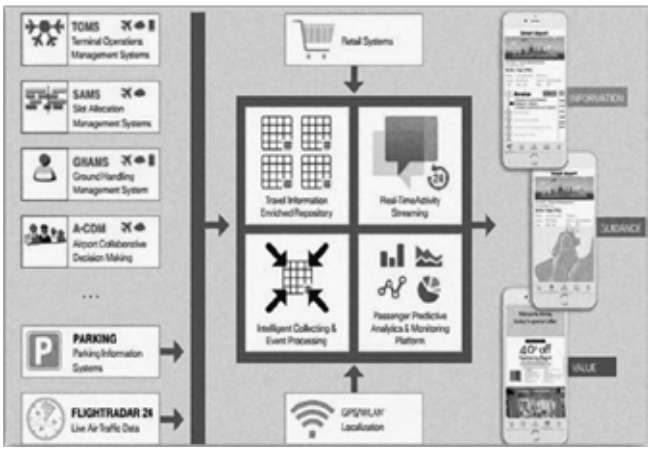
As an example, passenger touch-points will not be based on the same principle of the key information interchanges at check-in, security check or boarding. Instead of this simple principle, it will use a real-time and continuous connection to the passenger, that will permit access of the information anytime and anywhere.

Airport Management Strategy. (Source: iata.org/magazine)

Those capabilities will enable all the airport stakeholders -airlines, security, operations, concessionaires and other service providers to engage the passenger with relevant information and offers. The direction of those conversations is to be more personalized, media-rich and valuable.

Smart Airport Service Frame work

The common framework followed by many airport for its smart operation is as the given figure. It starts with Airport Main Systems like: Terminal Operations Management Systems (TOMS), Slot Allocation Management Systems (SAMS), Ground Handling Management System (GHAMS), Airport Collaborative Decision Making (A-CDM) and it ends with Parking Information and Flightradar 24 (Live Air Traffic Data).



Source:https://www.tsystems.com/blob/254378/f53cad7e93d458e48dd5873c1ab91e1f/dl-ttl-passengerexperience-data.pdf

All those systems are managed in a unified interface that has Travel Information Enriched Repository, Intelligent Collecting & Event Processing, Real-Time Activity Streaming (one of the main goals of the Smart Airport) and Passenger Predictive Analytics & Monitoring Platform.

At this unified interface are added the Retail Systems and GPS/WLAN. At the end the user (passenger) of this infrastructure delivers Information, Guidance and Value.

This Smart Airport experience allows an End-to-End customer communication from leaving home until entering the airplane. The airports gain full benefits out of digitalization. It gets the focus to their customers.

A few examples of the functionalities: If a flight is delayed, the restaurants and the shops near that terminal will send their offers to passengers of that flight. The passengers will always be informed about how many persons are at the check-in, what is the waiting time and what is the fastest way to the gate. Value added services are represented by vouchers when passing by selected shops or discounts.

Source:SITAOnline/intelligent-airport-meia-ict-aviation-forum-2013

Key Elements for Smart Services

The sensors, connections, collaborations, mobility and analytics are the key of the smart airport. Digital cameras are used for monitoring passenger queues at check-in, security check points and parking areas. In the designed smart phone applications, geo-location will be used for reducing passenger congestion.

Track & Trace technologies for tracking the checked-in luggage will be used. Social networking sites are used for influencing the buying patterns of a passenger at the airport. It will be used as media and opinion-influencing platform for information related to airlines, food, shopping, travel, etc.

Processing luggage touch-less through sensing devices and intelligent systems will be an important step. Check-in, security, payment, etc. will be achieved through sensors, connectivity, smart phones and automations. Those self-service systems and smart parking systems are enabling a hassle-free travel.

One of the most important parts of the Smart Airport is represented by the Integrated Airport analytics across disintegrated systems to slice and dice the data in order to analyses past performance and predict future performance.

Challenges and Solutions

There are a few important challenges for the traditional airport that the Smart Airport will solve with new technologies and ideas.

- Dissatisfied Passengers: The main points of the solution to this challenge are: touch-less self-services with no wait time, timely event notifications, on-demand contextual info delivery, etc.

  To solve these points the used technologies are: e-services & mobile services, location-based personalized info delivery on user devices and automated barcode/RFID/Sensors systems.

- Declining Share of Aeronautical Revenue: To solve this challenge, the passenger spending at the airport should be improved with promotions/ targeted offerings and the retail planning must be optimized and based on the real-time passenger flow information.

  The technologies used are Analytics – CCTV, Video and Social Networks, integration of non-aero services, Bluetooth and Wi-Fi access points to geo-locate passenger concentration points

- Increasing Competition: To achieve this there three main points: continuous innovation, improved marketing and brand building & improved airport rating.

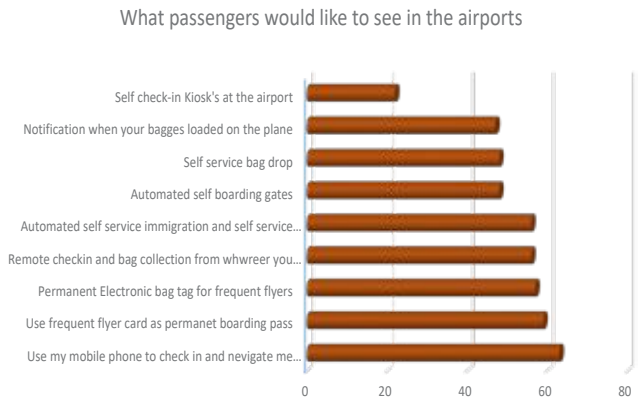
The key technologies are exactly the main ideas of the smart airport: technology innovation models, portals for smartphones and analytics for performance and improvement.

- Outdated/Unreliable IT: This is the most often problem of the traditional airport and its solution is the smart airport. On-demand IT resource & services, integration of airport systems, automation and self-service on end user devices are the solutions. The technologies are based on multi-channel collaboration and cloud, automations (Sensors/RFID/Wireless/ Smart gates, etc.), airport analytics/predictive information and airport mobility/augmented reality.

Airport interconnectivity

For most passengers, the travel experience starts with a form of transportation to the airport. Minimized travel times and a reduction in the environmental footprint were highlighted as the key drivers in determining choice, whilst the ultimate goal is for greater integration in terms of interconnectivity-

- Between different physical transports;
- Of processes, passenger luggage handle improvement;
- Of data, so that service providers can adapt to the new requirements.
  Studies revealed what passengers would like to see in the airports



Source:based on https:// www.internationalairportreview.com/ article/34859/future-aviation-next-20-years

Projects for Smart Airport

- Passenger Transport:
  - ✓ Recognize passenger is delayed in traffic – automatically rebook flight;
  - ✓ Driverless vehicles in the airport;
  - ✓ Inductive charging for cars and all airport located vehicles;
- Check-in:
  - ✓ Bypass terminal entirely – premium travelers check-in offsite, pass through security enroute;
  - ✓ Biometric (face recognition and iris scanning)and/or genetic information used to check-in passengers automatically upon airport entry;
- Passenger Luggage:
  - ✓ Passenger self-loading of luggage to container or direct to airplane;
  - ✓ Self-tagging luggage introduced;
  - ✓ Luggage sent straight from airport to destination on arrival via secure intermediary;
  - ✓ Entirely automated end-to-end luggage handling systems;
- Security/Immigration/Border Control:
  - ✓ Global trusted traveler program in place;
  - ✓ Ambient technology scans on arrival in terminal;
  - ✓ Optional genetic profile – based security;
  - ✓ Optional body-embedded identification, Smart identity cards carrying personal biometric and genetic data;
- Boarding:
  - ✓ Facial recognition used for operator-less boarding gates;
- Passenger Communications and Tracking:
  - ✓ Passengers can access unified interface from whole smart airport through one device;
  - ✓ Widespread interactive surfaces are enabling real-time information and feedback;
  - ✓ Natural language interfaces;
  - ✓ Biometrics and genetic profiles identify and track passengers through the smart airport;
  - ✓ RFID enabled smart airport – providing access to real-time location information of all objects and individuals;
- Retail:
  - ✓ Intelligent systems used to dynamically change store layout and displays in order to be prepared for different sets of passengers flying through at different times and their

historical sales trends;

- ✓ Intelligent short-term forecasting of retail trends and behaviors based on predictive analysis of social media dialogues;
- ✓ Personalized offers in straight connection with the destination;
- ✓ Discounts/offers for those arriving at the airport before the standard 2 hour window;

● Leisure:

- ✓ Immersive technology enabling personalization of the local experience, tailoring to specific interests such as heritage or shopping;
- ✓ Airport becomes a resort-style destination with minimal space for holding passengers pre-flight;
- ✓ Day/overnight surgery center

Conclusions

1. Smart airports will have to use multiple intersecting digital and automation technologies that have to converge in solving the new technology challenges.
2. To deliver a genuinely customer-centric experience, the smart airport partners will need to go beyond data sharing and ensure extended collaboration, from strategic planning through to operation decision-making. The same data will be shared and enriched by various users – including the passengers themselves – who will control the level of access to their personal information.
3. Smart phones, social media, airport sensors and new applications will generate exponential growth in data. New artificial intelligence knowledge-management tools, such as predictive analytics, will enable the generation of powerful new insights and identify emergent trends and patterns.
4. Tomorrow's airport will be a complex environment passenger-centered, being based on collaboration and innovation. This means critical roles will emerge around deep customer engagement, complexity management, and partnership working and innovation delivery.
5. Constant scanning of the long-term horizon will be critical to identify and assess emerging trends, forces, developments, ideas and weak signals that could have a direct bearing on the airport environment.
6. Effective management of a complex, distributed and potentially outsourced information and communications technology infrastructure will be a core competence required across the smart airport.
7. Rapid technological change, rising service expectations and the demand for free high-speed wireless connections are pushing up the cost of upgrading and maintaining the airport IT infrastructure.

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Fly Heading 230

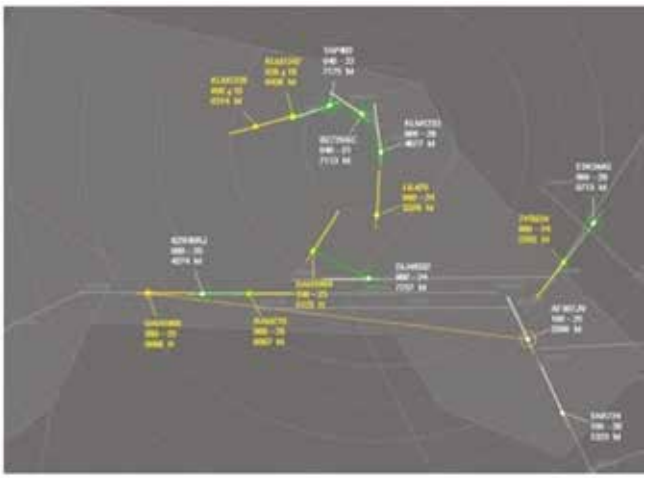
A vector is a heading (magnetic) issued to an aircraft to control its flight path. The radar vectoring procedure is one of the management tools which can be used by air traffic controller in areas where air traffic control service is provided. The basic methods of radar vectoring are constituted of several rules in order to handle all aircraft to achieve maximum use of airspace.

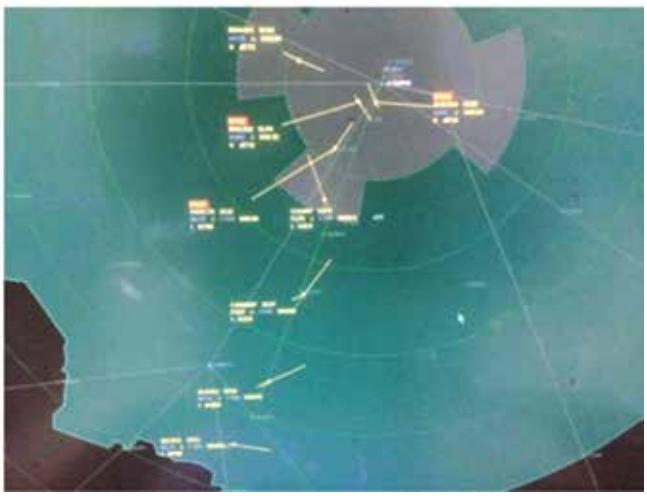
Air traffic control radars are devices which are used by air traffic controllers to detect, monitor and guide aircraft within a delimited airspace region. Radar vectoring is a part of radar control where radar control is a method of providing air traffic control services with the use of radar and Automatic Dependent Surveillance (ADS-B). The provision of air traffic control services without the use of radar is called procedural control.

During increased traffic at the airport, radar vectoring becomes the standard procedure in most of the large airports to arrange aircraft in sequence to ensure air traffic flow management for the most efficient use of airspace. Nowadays for growing traffic condition, radar vectoring is essential tool for management and handling of traffic. In some airfield procedures, radar vectoring is a mandatory procedure to guide aircraft on the final approach track.

In radar vectoring procedure, the controller can assign headings, altitudes and speeds to IFR aircraft in order to guide aircraft in his area of responsibility above the radar vectoring altitude/minimum vectoring altitude. Minimum vectoring altitude is the lowest altitude, expressed in feet AMSL, to which a radar controller may issue aircraft altitude clearances during vectoring/ direct routing except if otherwise authorized for radar approaches, departures and missed approaches. Whenever a controller provides radar guidance by vectors he is supposed to take responsibility on all navigation parameters: heading, altitude, speed (rate of climb/descent) until the interception of the final approach track.

Basically radar vectoring is mainly used by the ATC as a tool in order to ensure and enhance





- the air traffic flow management in the arrival and/ or approach phase of an instrument approach procedure
- the IFR aircraft arrangement in sequence in the arrival and/or approach phase of an instrument approach procedure
- the horizontal and vertical separation between all departing and/or approaching IFR aircraft

Beside these radar vectoring can be used by the ATC as a complementary tool in order to enhance:

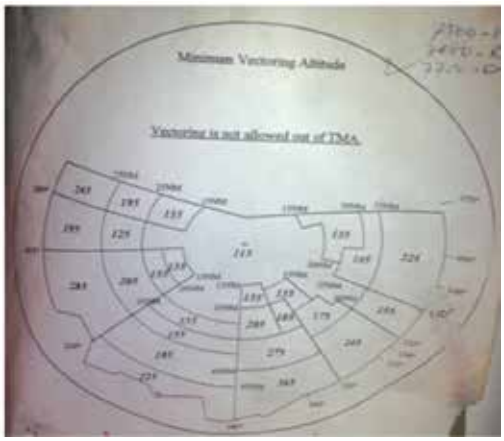
- The optimization of departing IFR aircraft climb inside or outside an arrival flow
- The en-route IFR traffic regulation in complex situations when classical management is failing
- The assistance to IFR or VFR aircraft in emergency or PAN-PAN situation where aircraft needs immediate assistance.
- The assistance to lost pilots or deviating pilots from their cleared track or other cases where the situation needs it like specific pilot requests.
- Maximize use of available airspace and comply with noise abatement procedures and avoid areas of known hazardous weather or known severe turbulence.
- Maneuver an aircraft into a suitable position below the clouds near an aerodrome for a visual approach and landing.

In most busiest airport, the radar separation minima varies from place to place depending on the integrity, accuracy, reliability and coverage of the radar system with minimum 3 miles of separation between two aircrafts ranging up to 10 miles as authorized by the appropriate authority. The separation minima is lower for aircrafts close to the airport or within 40 miles from the radar antenna site and is larger for aircrafts flying beyond 40 miles from the radar antenna site. Whenever two aircrafts are observed on radar screen with proper identification but without required horizontal separation minima at different level, one of the aircraft has to hold to achieve the required separation minima in case of arrival or if both has to pass through the window level which generates unnecessary fuel burning, noise pollution, extra workload and loss of time. When an aircraft with air speed 200kts or below conduct an orbit she will make standard rate of turn of 3 degree per second which takes her 2 minute to complete a 360 degree turn. The aircraft once completes an orbit, the horizontal distance between the two aircrafts is increased by 6NM or more. If the airspace where the aircrafts are operated requires horizontal separation minima 3NM only then the gap between two aircrafts are more than required. To reduce such kind of unnecessary gap between the two aircrafts, the aircraft are assigned certain heading as per requirement by the air traffic controllers.

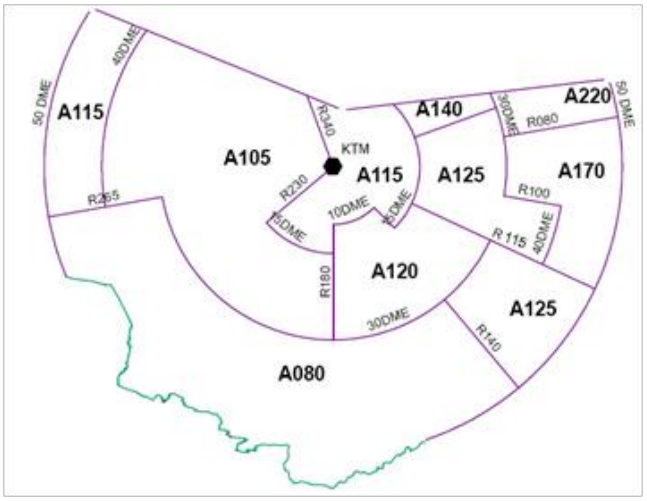
Radar Service in Nepal

Radar system was installed and came in operation at Kathmandu airport since 1997 under Japanese official development assistance. The Japanese government's grant to modernize TIA came after two major crashes involving Thai Airways and Pakistan International Airlines. The system was terminal radar control system with radar control service provided in terminal control airspace up to 50NM from Radar antenna site at Kathmandu airport. The system consisted of Primary radar and Secondary radar. As the radar antenna site was installed within the Kathmandu valley surrounded by high hills there were lots of blind spots with loss of radar identification at various spots outside valley. Due to the limited coverage of radar system MVA designed had higher altitude restriction which made almost impossible for radar vectoring during normal operation. Taking into consideration of the altitude restrictions it was restricted to vector aircraft only during departure in old radar system.

The installation of a secondary radar at Bhattedanda had been proposed in 1994 when the Nepal government approved Japan's plan to modernize TIA. However, the plan was put on hold due to multiple reasons. As TIA is situated in a valley surrounded by hills, the coverage of the existing radar does not extend beyond 50 nautical miles (90 km). After long awaited years for the upgradation of the radar system of 90s, the plan to install a sophisticated radar system materialized in 2013 when JICA approved Rs. 906 million grant for Nepal as part of the broader TIA modernization project. The MSSR installation was completed in July 2016 after four years of work. Finally MSSR came in day to day operation formally from Feb 1st, 2018. The current radar system has the capacity to identify up to 4,096 aircraft having Mode S transponder capability. CAAN with the financial and technical assistance of Japan International Cooperation Agency (JICA) has installed En-route Monopulse Secondary Surveillance Radar (E-MSSR) at Bhattedanda of Lalitpur and Terminal Monopulse Secondary Surveillance Radar (T-MSSR) at Tribhuvan International Airport (TIA). The MSSR coverage has extended to the entire eastern, southern and Himalaya regions, and up to Surkhet (250 nautical miles or 463 km) in the west. As the newly installed system has higher coverage and reliability, MVA designed has been lowered drastically compare to old radar system which have given liberty on radar vectoring for landing and departing traffics above MVA in controlled airspace.



MVA chart designed in late 90s
TIA



Existing MVA chart within 50Nm of 50Nm of TIA

Conclusion

The basic methods of radar vectoring are constituted of several rules in order to handle all aircraft to achieve maximum use of airspace. During increased traffic at the airport, radar vectoring becomes the standard procedure in most of the large airports to arrange aircraft in sequence to ensure air traffic flow management for the most efficient use of airspace. The air traffic controller can give vectors to one or several aircraft in order to reduce the horizontal separation with previous aircraft in the approach sequence or to shorten the distance to the approach gate area. The advantage of this method is that air traffic controllers will ensure the continuity of air traffic flow management and answer the need of fuel saving requested by airline companies. After the installation and operation of newly installed MSSR in Nepal, vectoring is a common tool for adjusting required distance between two arrivals without holding requirement. This kind of air traffic control tools benefits airlines for fuel saving, reduction on carbon emission, sound pollution, smooth and continuous flow of air traffic.

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नेपालमा हवाई सेवाको वर्तमान अवस्था

सुनिल मूल
प्रवन्धक, ने.ना.उ.प्रा.

नेपालको विद्यमान भू-बनोटका लागि हवाई सेवाको विकास छिटो र आरामदायी यात्रामा मात्र सीमित छैन । गाउँ नै गाउँले भरिएको मुलुक, जहाँ दुर्गम तथा उच्च पहाडी क्षेत्रमा विकासको गतिबाट टाढै रहन बाध्य छन् । यस्ता दुर्गम ग्रामीण क्षेत्रमा बसोबास गर्दै आएका आम नेपालीहरुको लागि हवाई सेवा यातायातको एक साधन मात्र नभएर अत्यावश्यक सामानहरूको ओसारपसार, औषधोपचार, पाठ्यसामग्रीका साथै विकास निर्माणका साधनलाई सहज आपूर्ति गर्ने साधनको रूपमा समेत रहँदै आएको छ । यस अलावा नेपालमा गरिबी निवारण र विकासको प्रतिफलमा समान वितरण, सन्तुलित सामाजिक आर्थिक विकासको अभिवृद्धि, राष्ट्रिय एकता र पर्यटन विकासमा समेत हवाई यातायातको अतुलनिय योगदान रहँदै आएको छ। उद्योग व्यवसायहरुको कमि तथा भौतिक पूर्वाधारहरुको अपर्याप्तताले खासै आर्थिक उन्नति हासिल गर्न नसकिएको वर्तमान परिवेशलाई मध्य नजर गर्दै मुलुकमा वैदेशिक मुद्रा आयआर्जन गर्न सक्ने अत्यन्तै बलियो आधारको रूपमा नेपालले पर्यटन उद्योगलाई उच्च प्राथमिकताको सूचिमा राखेको छ। पर्यटन उद्योगसँग प्रत्यक्ष सरोकारमा रहने पर्यटकहरूलाई नेपालमा प्रवेश गराउने सबैभन्दा महत्वपूर्ण यातायात साधनको रूपमा हवाई यातायात नै रहेको छ । यो तथ्य स्थलमार्ग भन्दा हवाईमार्ग प्रयोग गरी नेपाल भित्रदैं गरेको पर्यटक संख्याको तथ्यांकले पुष्टि गरेको छ । त्यसैले हवाई यातायात र नेपालको पर्यटन एकअर्कामा अन्योन्याश्रित र परिपूरक सम्बन्ध रहेको कुरामा कुनै मतान्तर रहेको छैन । यसको विकासले छिटो आरामदायी आवागमन गर्ने माध्यमका रूपमा सुगमता ल्याएको मात्र नभई समग्र राष्ट्रको आर्थिक उन्नतिमा समेत उल्लेख्यनिय योगदान पुऱ्याउँदै आइरहेको कुरा अब हामी माझ कतैपनि छिपेको छैन ।

मुलुकको विद्यमान विमानस्थलहरूको अवस्था र निर्माणलाई मध्यनजर गर्दा विभिन्न क्षेत्रलाई आर्थिक सामाजिक तथा भावनात्मक रूपमा एकत्रित गरी क्षेत्रीय विकासको कार्यलाई सन्तुलित गर्न सबै क्षेत्रलाई यातायातले जोड्न जरुरी हुन्छ । तर, भौगोलिक विषमता तथा विकटताले जकडिएको नेपालमा स्थलमार्गको पर्याप्त विकास भइ नसकेको र यसको विकासका लागि आनुपातिक रूपमा अझ बढी खर्च गर्नुपर्ने भएकोले विमानस्थल निर्माणमा जोड दिइदैं आएको छ । यी नै तथ्यलाई मनन् गरी बजेटको ठूलो हिस्सा हवाई यातायात क्षेत्रहरुमा खर्च भई आएको छ । हरेक वर्षहरूमा हवाई सेवाको विकासलाई उच्च प्राथमिकताको सूचीमा राखी मुलुकबाट ठूलो धनराशि खर्च हुँदै आएतापनि अपेक्षित उपलब्धी भने हासिल गर्न सकिरहेको छैन ।

मुलुकको आर्थिक सामाजिक एवम् राजनैतिक विकासमा उल्लेखनीय भूमिका निर्वाह गर्ने विमानस्थल निर्माण तथा भौतिक सुविधा विस्तार कार्यमा प्रभावकारीता नहुनु भनेको मुलुकको समग्र विकासमै नकारात्मक अवस्थाको सिर्जना हुनु हो । गौचरण विमानस्थलबाट हवाईयात्रा शुरु भएको नेपालमा हाल एउटा अन्तर राष्ट्रिय विमानस्थल (त्रिभुवन अन्तर्राष्ट्रिय), चार क्षेत्रिय आन्तरिक विमानस्थल (विराटनगर, गौतमबुद्ध, नेपालगञ्ज, पोखरा), तीस उडानमा चालु रहेका आन्तरिक विमानस्थल (भरतपुर, चन्द्रगढी, धनगढी, जनकपुर, सिमरा, सुर्खेत, तुम्लिङ्गटार, बाजुरा, भोजपुर, डोल्पा, जोमसोम, जुम्ला, खानिडाडा, फाप्लु, रारा, सिमिकोट, तेजिङ्ग हिलारी, लामिडाडा, रामेछाप, रुकुम चौरजहारी, रुकुम सल्ले, रुम्जाटार, ताप्लेजुङ्ग, थामखर्क, बलेवा, दाङ्ग, मनाङ्ग, मेघौली, राजविराज, सांफेवगर), चौंध बन्द रहेका आन्तरिक विमानस्थल (बैतडी, बझाङ्ग, दार्चुला, ढोरपाटन, डोटी, जिरी, कांगेलडाडा, लाङ्गटाङ्ग, महेन्द्रनगर, मसिनेचौर, पालुङ्गटार, रोल्पा, स्याङ्गबोचे, टिकापुर), तीनवटा अन्तर्राष्ट्रिय (गौतमबुद्ध, पोखरा, निजगढ) र पाँचवटा आन्तरिक (अर्घाखाँची, गुल्मी, ईलाम (सुकिलुम्बा), कालिकोट, खिजिचण्डेश्वरी) गरेर आठवटा निर्माणाधीन विमानस्थलहरू रहेका छन् । कूल मौजुदा विमानस्थलहरु मध्ये कालोपत्र सम्पन्न विमानस्थलहरुको संख्या ३१ रहेका छन् । तर देशको आन्तरिक स्रोत, विभिन्न दातृ राष्ट्र एवम् संस्थाहरूको ऋण तथा अनुदान सहयोग आदि समावेश गरी बर्सेनि गरिँदै आएको लगानीको अनुपातमा तदनुरुपको उपलब्धी भने आशा गरिए अनुरूप प्रतिफल प्राप्त गर्न बाँकी नै रहेको देखिन्छ । यसो हुनुको कारण लहड र राजनैतिक दबाबका आधारमा धावनमार्गहरुको निर्माण हुँदैजाने तर विमानस्थलमा पुऱ्याईनु पर्ने अत्यावश्यक पूर्वाधारहरुको अपर्याप्तताले पूर्णता हुन नसकि भरपर्दो बन्न सकेको छैन भने अर्कोतर्फ निर्माण सम्पन्न गरिएका विमानस्थलहरूमा उडान भर्ने

वायुसेवा कम्पनिहरू समेत आकर्षित हुन सकिरहेको छैन । जसले गर्दा वायुसेवा कम्पनी उडानको निमित्त उत्सुक नभई विमानस्थल निर्माण मात्रले सार्थकहीन लगानीमा परिणत हुन पुगेको देखाएको छ। यसको ज्वलन्त उदाहरणका लागि मौजुदा विमानस्थलमध्ये ३५ स्थानमा मात्र नियमित उडान सञ्चालन र १४ वटा विमानस्थलहरु बन्द अवस्थामा रहेको तथ्यले पुष्टि गरेको छ। विमानस्थल भनेको स्थानीय क्षेत्रको विकास, विस्तारमा प्रत्यक्ष सरोकारमा रही मुलुकको सर्वाङ्गिण सन्तुलित विकासमा टेवा पुऱ्याउने मात्र होइन कि प्रत्येक स्थानीयबासीहरुको दैनिकी जन जीवनमा समेत महत्वपूर्ण भूमिका खेल्ने भएको हुँदा स्थानिय जनताहरुबाट मेरो क्षेत्रको विमानस्थल मेरै लागि हो भन्ने भावना जागृत गराउन सकिएमा उच्च लगानीबाट निर्मित विमानस्थलहरु अवश्य पनि यति धेरै ठूलो संख्यामा बन्द हुने थिएनन् । अतः स्थानिय जनताहरु यस तर्फ जागृत हुनै पर्दछ ।

विश्वमा वायुयानहरूको नवीनतम आविष्कारसँगै विमान कम्पनीहरूको स्थापना पनि बढ्दो छ। विगतमा नेपाल वायुसेवाको एकाधिकार रहेको नेपाली उड्डयन सेवा अहिले निकै व्यापक हुन पुगेको छ । नागरिक उड्डयनको क्षेत्रमा अहिले निजी क्षेत्रका उत्साही उद्यमीहरू एकपछि अर्को गर्दै देखा पर्दै आएका छन्। मुलुकले सन् १९९२ बाट हवाई क्षेत्रमा उदार नीति अवलम्बन गरिएपछि निजी क्षेत्रका वायुसेवा कम्पनीका लागि उदार आकाश प्राप्त भएको हो । यसबाट हवाई सेवामा राष्ट्रिय तथा अन्तर्राष्ट्रिय उडानमा निजी क्षेत्रका लागि ढोका खुल्न मद्दत पुग्न गयो । परिणाम स्वरूप आन्तरिक हवाई यातायात सञ्चालनका लागि धेरै निजी वायुसेवा कम्पनीहरू अस्तित्वमा आउन सफल भए । खासगरी यसले जनतालाई पुऱ्याइनु पर्ने हवाई सेवाको सहज एवम् सुविधा भन्दा हवाई सेवा सञ्चालन प्रमाणपत्र प्राप्त गर्नेको संख्यामा ह्वात्तै बढाएका देखिन्छन् । यहि क्रमको निरन्तरता स्वरुप यस आलेख तयार गरि रहँदा सम्मको अवधिभित्र ८७ वटा निजी क्षेत्रका वायुसेवा कम्पनीहरूले हवाई सेवा सञ्चालन अनुमति प्रमाणपत्र प्राप्त गरिसकेको देखिएको छ भने यसै अवधि भित्रमा जारी अनुमति पत्र मध्ये २९ वटा वायुसेवा कम्पनी संस्थाहरुको मात्र सञ्चालन वैधता र उडान सञ्चालनमा संलग्न रहेको देखिएको छ। कूल जारी हवाई सेवा सञ्चालन अनुमति पत्रमा सञ्चालनमा नरहेका ५८ वायुसेवा कम्पनीहरुको अनुमति पत्र खारेज समेत गरिएको अवस्था छ। हाल सञ्चालनमा रहेका अनुमतिपत्र प्राप्त वायुसेवा कम्पनीहरु मध्ये बाट स्थिर पखेटा (Fixed Wing) वायुसेवा सञ्चालक संस्था क्रमशः नेपाल वायुसेवा, बुद्ध एयर, यति एयरलाइन्स्, सिता एयर, तारा एयर, सिम्रिक एयर, हिमालय एयरलाइन्स्, सिम्रिक एयरलाइन्स्, सौर्य एयरलाइन्स्, श्री एयरलाइन्स् गरी कुल वायुसेवा संस्था संख्या १० र रोटर पंखा (Rotor Wing) हेलिकप्टर सेवा वायुयान सञ्चालन संस्था क्रमशः एयर डाइनेष्टि हेलि सर्भिस, फिस्टेल एयर (सुमित हेलिकप्टर्स), हेलि एभरेष्ट, माउण्टेन हेलिकप्टर्स, प्रभू हेलिकप्टर, कैलाश हेलिकप्टर, अल्टीच्यूड एयर, मकालू एयर, र मनाङ्ग एयर सहित संख्या ९ रहेका छन् । त्यसैगरी उड्डयन खेलकुद तर्फ प्याराग्लाइडिङ्ग ७०, अल्ट्रालाइट ४ र बेलुन नेपाल उड्डयन सेवा सञ्चालन संख्या १ गरी कूल ७५ संख्यामा सञ्चालन भइरहेका छन् भने थप ५ संख्यामा कम्पनीहरू हवाई सेवा सञ्चालन प्रमाणपत्र प्राप्त गर्ने क्रममा देखिएका छन् । सञ्चालनमा रहेका प्याराग्लाइडिङ्ग सेवा मध्ये पर्यटकीय नगरी पोखरा तथा अन्य स्थानहरुका अतिरिक्त काठमाण्डौं उपत्यकाको गोदावरीमा एक र ललितपुरको लप्सीखेत संखरापुरमा एक गरी दुई स्थानहरुमा उक्त सेवा सञ्चालनमा रहेका छन् । उड्डयन खेलकुद अन्तर्गत उड्डयन सेवा सञ्चालनका लागि आवेदनमा आएका ५ संस्थाहरुबाट मुलुक भित्र रहेको संखुवासभा, इलाम, मकवानपुरको टिष्टुङ्ग, विराटनगर र नुवाकोटमा उड्डयन खेलकुद गतिविधि सञ्चालनमा ल्याउने गरी आवेदन परेका छन् । हवाई सेवा सञ्चालन प्रमाणपत्र प्राप्त गरेका यी कुल संख्यामा स्थिर पंखा भएका, रोटर पंखा जडित र उड्डयन खेलकूदसँग सम्बन्धित प्याराग्लाईडिङ्ग, अल्ट्रालाईट, बेलुन सेवा कम्पनीहरु हुन् । यसरी ठूलो संख्यामा हवाई सेवा सञ्चालन प्रमाणपत्र प्राप्त गर्ने गरिएतापनि यसको तत्कालिन बैद्यता भने सबैले जारी गरी राख्न नसक्नु र वायुसेवा सञ्चालनमा नियमियत गरी राख्ने वायुसेवा कम्पनीहरुको संख्यामा न्यून उपस्थिति देखिएको कारण हवाई यात्रुले जुन हिसाबमा पाउन सक्ने स्थितिको सुविधा हो त्यस अनुरुप पाउन नसकिरहेको अवस्था झल्काउँदछ । यस तथ्यलाई कुल ८७ वायुसेवा कम्पनीहरुबाट हवाई सेवा सञ्चालन अनुमति प्रमाणपत्र प्राप्त भएतापनि २९ संख्याको मात्र वायुसेवा कम्पनीहरुको अनुमतिपत्र बैद्यता कायम रहनु बाँकी ५८ कम्पनिहरुका वायुसेवा सञ्चालनमा नरहनुले पुष्टि गरेको छ।

त्यसैगरी, विभिन्न होडबाजी र लहडकै भरमा नेपालमा विमानस्थलहरुको निर्माण थप्दै जाने क्रियाकलाप बढ्दो छ। एकातिर अस्थिर सरकारका कारण हरेक पल्ट बन्ने सरकारको प्राथमिकता अर्को सरकारका लागि अर्कै प्राथमिकतामा पर्नुले विकास निर्माणको दिशामा खासै सुधार हुन नसकि रहेको तितो यथार्थ बोक्न हामी बाध्य छौं । यस स्थितिमा विमानस्थलहरुको निर्माण र विकास समेतमा अछुतो रहन सकेको छैन । विमानस्थल जस्तो अत्यन्त सम्बेदनशिल क्षेत्रको निर्माण गर्न पर्याप्त विस्तृत सम्भाव्यता अध्ययन पश्चात मात्र कार्य प्रकृया अघि बढाइनु पर्नेमा राजनैतिक होड्बाजी अझ भनौं छोटो समयमा बनेका अधिकांश सरकारको अदुरदर्शी नीतिकै कारण विमानस्थलहरु निर्माणमा भने तिब्रता दिँदै जाने तर पूर्वाधार विकास विस्तारमा भने सुस्तता र उडान सञ्चालनमा नियमितता गर्न नसकिएको स्थिति देखा पर्दै आएको छ। यस्तो स्थितिमा विमानस्थल निर्माण गर्नुलाई मात्र सफलता मान्न सकिँदैन । विमानस्थल निर्माण पश्चात त्यस्ता विमानस्थलहरुमा पर्याप्त भौतिक पूर्वाधारहरुका साथै हवाई यात्रुहरुको पनि सोही अनुरुपको बढोत्तरी हुनुपर्ने समेतको आवश्यक्ता हुन्छ तर नेपालमा जुन हिसाबले विमानस्थलहरुको निर्माण सम्पन्न गरिएका छन्

त्यस हिसाबले त्यहाँ पूर्वाधारहरुको विकास हुन नसकेको मात्र होइन पर्याप्त हवाई यात्रु समेत पाउन सकिएको छैन । अपर्याप्त पूर्वाधार र यात्रुमा कमी भएकै कारणले वायुसेवा कम्पनीहरु त्यस्ता क्षेत्रहरुमा उडान भर्न हिचकिच्याई रहेको पाईन्छ। हरेक विमानस्थल निर्माणबाट स्थानिय बासिन्दाहरुको जीवनस्तर उकास्नमा के कति मद्दत पुग्न गयो, यसबाट मुलुकको अर्थतन्त्रमा के कति सुधार हुन पुग्यो, यसले स्थानिय सेवा तथा वस्तुको उपभोगमा के, कसरी, कति टेवा पुऱ्याउन सकेको छ र समष्टिगत रुपमा राज्यले यसवाट के, कस्तो आय आर्जन गर्न सकेको छ भन्ने सन्दर्भमा कुनै ध्यान पुग्न सकिरहेको देखिँदैन । त्यस्तै मूलुकको ग्राहस्थ्य उत्पादनमा यस क्षेत्रको के, कति योगदान छ भन्ने सवालमा छुट्टै ढंगबाट विवेचना गर्न सक्ने तथ्यांकहरुको पनि विकास गर्न सकिरहेको छैन, यस स्थितिमा स्थानिय क्षेत्रको विकास एवम् त्यस्ता क्षेत्रमा बसोबास गर्ने जनताको जीवनस्तरमा सकारात्मक परिवर्तन ल्याउन नसकेमा नवः निर्माण गरिएका विमानस्थलहरुको कुनै औचित्य रहँदैन । भन्नाको तात्पर्य नेपालमा विमानस्थल निर्माण गर्ने हुन्न भन्ने पंक्तिकारको आशय कदापी होइन । विमानस्थलहरु बन्नु पर्दछ, साथसाथै यस्ता विमानस्थलहरुमा आवश्यक पूर्वाधारहरु समेतको विकास गरी वायुसेवाहरुको आर्कषण समेत हुने गरी यसको पूर्व चाँजोपाँजो मिलाईनु पर्दछ । त्यसैगरी, हाम्रो जस्तो सानो भू-भाग ओगटेको मुलुकका लागि कतिवटा विमानस्थलहरु आवश्यक पर्ने हो, सो समेतलाई एकिन गरेर मात्र यसको कार्य प्रकृयालाई अघि बढाइनु पर्ने र यस्ता विमानस्थलहरुबाट स्थानिय जनताहरुमा थप रोजगारी सिर्जनाका साथै गरिबी निवारण समेतमा विशेष टेवा पुऱ्याउन सक्ने विषयमा अध्ययन गरी स्थानिय क्षेत्रको समूचित विकासमा महत्वपूर्ण योगदान पुऱ्याउन सक्नु पर्दछ भन्ने आशय हो ।

नेपालको अन्तर्राष्ट्रिय हवाई यातायात गतिविधि तर्फ हेर्ने हो भने राष्ट्रिय ध्वजा वाहक संस्था दिन प्रतिदिन कमजोर बन्दै जानु र केही निजी वायुसेवा कम्पनीहरूले अन्तर्राष्ट्रिय उडान सञ्चालनका लागि सक्रियता बढाइएतापनि व्यापक र दिगो हवाई सेवा सञ्चालन गर्न सक्षम नभएकैले गर्दा नेपालमा बाह्य हवाई सेवा कम्पनीहरूको सेवा विस्तार उल्लेख्य रूपमा बढ्ने क्रम जारी छ । जसले गर्दा द्विपक्षीय हवाई सेवा सम्झौता मार्फत् नेपालले प्राप्त गरेको हवाई सिट संख्या समेत उपयोग हुन नसकी हवाई सेवा स्वस्थ्य एवम् प्रतिस्पर्धीको अभावमा नेपालको हवाई उद्योग सफल हुनबाट बन्चित हुनु परेको तीतो यर्थाथ देखिएको छ। हाल मुलुकभित्र अन्तर्राष्ट्रिय उडान भर्ने नेपाल वायुसेवा, बुद्धएयर र हिमालयन एयरलाइन्स गरी जम्मा संख्या ३ र नेपालमा उडान गर्ने वाह्य अन्तर्राष्ट्रिय वायुसेवा संस्था संख्या २९ रहेका छन् । यस स्थितिमा नेपालमा अन्तर्राष्ट्रिय पर्यटकहरुको बढ्दो आवागमन र आन्तरिक पर्यटकहरुको वृद्धि समेतलाई मध्यनजर गरी मुलुकका आन्तरिक तर्फका यति, अग्नि, गुण र सिम्रिक एयरको संयुक्त लगानीमा अन्तर्राष्ट्रिय विमान कम्पनी ल्याई अन्तर्राष्ट्रिय क्षेत्रहरुमा विमान सञ्चालन गर्ने तयारी गर्दै गरेको समाचार र राष्ट्रिय ध्वजावाहक संस्थाबाट हालै नयाँ विमानबाट हवाई सेवा सञ्चालनमा ल्याएको गतिविधिहरुले मुलुकको आन्तरिक एवं अन्तर्राष्ट्रिय हवाई क्षेत्रको विकासमा नयाँ आशाका किरण पलाउँदै गरेको शुभ सङ्केत भने देखाएको छ। त्यसैगरी पोखरा तथा गौतमबुद्ध विमानस्थल अन्तर्राष्ट्रियस्तरको सुविधा सम्पन्न विमानस्थलको रुपमा निर्माण कार्य सम्पन्न गर्ने कार्यको थालनी भई यसको तिब्र कार्यान्वयनको अवस्थालाई हेर्ने हो भने यसले नेपालको दीर्धकालीन हवाई सेवाको विकासमा विशेष टेवा पुग्न सक्ने निश्चितता समेत देखाएको छ ।

नेपालको वर्तमान हवाई गतिविधिलाई मध्य नजर गर्ने हो भने सुलभ, सुरक्षित, भरपर्दो र नियमित हवाई सेवाको विकास, विस्तार र प्रवर्धन गर्न हालै मुलुकभित्र नागरिक उड्डयन क्षेत्रमा भएका केही गतिविधिहरु तर्फ दृष्टिगत गर्नुपर्दा आन्तरिक विमानस्थलहरुमा थप भौतिक पूर्वाधारहरुको विकास, विस्तार कार्य शुरु भई सकेको र अन्तराष्ट्रिय विमानस्थलको थप पूर्वाधार विकासमा नव प्रविधि जडान कार्यमा तीव्रता दिनुका साथै भूकम्पिय सुरक्षाको दृष्टिकोणले अत्यावश्यक उपकरणिय योजनाको कार्यान्वयन आरम्भ भई सकेका छन् । यसै अवधिभित्र आन्तरिक विमानस्थलहरुको यात्रु सेवा शुल्क हवाई टिकटमा समावेश गरिएको अवस्था छ । त्यसैगरी युरोपबाट उदगम हुने पर्यटक तथा अन्तर्राष्ट्रिय पर्यटन बजारको मुख्य बिन्दुको रुपमा रहेको युरोपबाट सिधा उडानको अभाव रही आएकोमा सेप्टेम्बर २०१३ देखि टर्कीस विमान सेवाले काठमाण्डौं(इस्तान्बुल उडान आरम्भ गरी सञ्चालनमा रहेको छ । यसबाट नेपाल आउन चाहने पर्यटक तथा यात्रुलाई युरोपसँग सिधा हवाई सेवा पहुँच विस्तारमा टेवा पुऱ्याएको छ । यसले नेपाल र नेपाली हवाई विकासमा अत्यन्तै सकारात्मक प्रभाव खेल्दै जाने संकेत देखाएको छ ।

राष्ट्रको सर्वाङ्गिण विकासका लागि हवाई यातायातको विकास अपरिहार्य रहन्छ । भौगोलिक विकटता र निरपेक्ष गरिबीको रेखामुनिका जनसंख्याको ठूलो हिस्सा बोकेको नेपालका लागि हवाई यातायातको माध्यमले भौगोलिक निकटता, सन्तुलित क्षेत्रीय विकासका साथै गरिबी निवारणमा विशेष टेवा पुऱ्याउन सक्ने भएकोले यस क्षेत्र उच्च प्राथमिकतामा रहँदै आएको हो । यस तथ्यलाई मनन् गरी बढी भन्दा बढी अन्तर्राष्ट्रिय क्षेत्रहरुमा स्वदेशी वायुयानहरुको माध्यमबाट हवाई सेवाको पहुँच बढाउँदै जाने दिशा तर्फको कार्यमा ध्यान केन्द्रित गर्नु अबको अनिवार्य आवश्यक्ता बनेको छ ।

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Carbon Footprint of Aviation Industry

Carbon footprint is the total amount of carbon dioxide (CO_2) released in the atmosphere as a result of activities of an individual, event, organization, or product. It is the total amount of greenhouse gases produced directly and indirectly by everyday human activities, usually expressed in equivalent tons of CO_2. It is calculated for the time period of a year. An increase in greenhouse gas emissions, and therefore in carbon footprint, is the primary event associated with climate change that has led to global warming. There are countless things that we engage in that contribute to greenhouse gases, with transportation being a huge contributor. And with so many makes and models of vehicles on the road and planes in the air at any given time, travel has a huge impact on what goes in our atmosphere. Here in this article, the writer is trying to explain the carbon footprint of aircrafts.

More than 100,000 commercial flights take place a day, creating a lot of carbon emissions. Those emissions are potentially more damaging than those from ground-based transportation because most of them are inserted directly into the upper atmosphere where they cannot be absorbed by the normal carbon sinks-trees, oceans, and the earth itself. Keeping in mind the admonition of Hansen (2008) "If humanity wishes to preserve a planet similar to that on which civilization developed and to which life on Earth is adapted, paleo-climate evidence and ongoing climate change suggest that CO_2 will need to be reduced from its current 385 ppm to at most 350 ppm. If the present overshoot of this target CO_2 is not brief, there is a possibility of seeding irreversible catastrophic effects." International Air Transport Association, IATA (2008) reports that in 2004, aviation's emissions of CO_2 were 705 million tons, including commercial, military and general aviation. Statistically, this represents 2.54 percent of global emissions of CO_2 from fossil fuel use. IATA (2008) also states that if other greenhouse gases are included, aviation accounts for 3 percent of the total human made contribution to climate change. While a contribution of 3 percent to global anthropogenic greenhouse gas emissions may still seem negligible, the percentage should be considered with regard to

a. growth rates in the aviation sector,
b. the reduction in greenhouse gas emissions demanded by the Intergovernmental Panel on Climate Change (IPCC)
c. aviation is still an activity largely confined to industrialized countries with high per capita emissions levels.

Carbon emissions contribute to climate change, which can have serious consequences for humans and their environment. The burning of fossil fuels releases carbon dioxide and other greenhouse gases. These carbon emissions raise global temperatures by trapping solar energy in the atmosphere. This alters water supplies and weather patterns, changes the growing season for food crops and threatens coastal communities with increasing sea levels. Global warming and climate change have long-term and short-term impacts on our environment. Caused by air pollutants such as carbon dioxide and methane, global warming is the gradual increase of air temperature across the globe. The rise in air temperatures can lead to higher extinction rates, increased risk of disease and political repercussions, such as wars over available resources.

The environmental impact of aviation occurs because aircraft engines emit particulates and gases which contribute to climate change and global dimming. Airplanes emit particles and gases such as carbon dioxide (CO_2), water vapor, hydrocarbons, carbon monoxide, nitrogen oxides, sulfur oxides, lead, and black carbon which interact among themselves and with the atmosphere. Despite emission reductions from automobiles and more fuel-efficient and less polluting turbofan and turboprop engines, the rapid growth of air travel in the past years contributes to an increase in total pollution attributable to aviation. From 1992 to 2005, passenger kilometers increased 5.2 percent per year. Comprehensive research shows that despite anticipated efficiency innovations to airframes, engines, aerodynamics and flight operations, there is no end in sight, even many decades out, to rapid growth in CO_2 emissions from air travel and air freight, due to projected continual growth in air travel. Aviation and climate policy has received considerable attention recently, for several reasons: deepening concerns that

aviation does not pay its external costs; more profound awareness that climate change requires a substantial, urgent response; and acknowledgement that, by 2050, the growth of demand for air travel could potentially consume almost all the emissions savings achieved by other sectors of the economy.

The aviation sector is a top-ten global emitter and for 4.9% of the warming impact on the Earth. In 2015, aviation accounted for 2.1% of global CO_2 emissions. Aviation's climate impact is not restricted to its CO_2 emissions-more than half of aviation's climate impact comes from non-CO_2 effects. Planes release other greenhouse gases and water vapor into the atmosphere, which create warming feedbacks. Taking these non-CO_2 effects into account, the aviation sector comprises 4.9% of historical radiative forcing. Compared with other modes of transportation, aviation has an outsized climate impact, accounting for 12% of global CO_2 emissions from transport. The aviation sector's emissions have already risen dramatically since 1990 and are expected to grow exponentially by mid-century. The international aviation sector's emissions rose 54% from 1990 to 2015 and are projected to increase as much as 4.3% annually over the next 20 years. Demand far outpaces the sector's marginal efficiency improvements, and the sector's emissions continue to grow at a rate so fast that not addressing the problem poses a threat to the Paris Agreement targets. While the aviation sector is not easy to decarbonize in the near term, there are solutions that must be bolstered and accelerated to reduce emissions in the short-term. If aviation society is to avoid exceeding the 1.5°C temperature threshold called for in the Paris Agreement, which leaves a carbon budget between 200-350 GT CO_2 to cover in the period of 2016-2100. For aviation, under current scenarios it is envisaged that aviation could emit 56 GT CO_2 over the period 2016-2050, or in other terms, one-quarter of the remaining carbon budget over this period. This points to how critical it is for aviation to contribute its fair share towards achievement of the 1.5°C.

The aviation industry needs to deploy available clean aviation technology, lower-carbon fuels, and operational efficiency improvements more rapidly in the near-term. Countries, particularly developed countries, must begin setting ambitious goals for the reduction of domestic aviation emissions too as they represent approximately 40% of global aviation activity. Aviation decarbonization pathways must also take into account the other half of aviation's climate pollution problem, non-CO_2 effects, and should prioritize transitioning away from offsetting at the earliest practicable date. Once a government sets a sufficiently ambitious long-term pathway, there must be an accompanying roadmap in place to achieve the pathway, which defines actions for the near-term, medium-term, and long-term and policies to enable these actions. The aviation industry must begin addressing non-CO_2 climate effects as soon as possible. Industry and governments should invest in scientific research related to non-CO_2 effects and should advance measures to address non-CO_2 in the near-term, such as avoiding flight paths in climate-sensitive areas and developing operational requirements and engine standards to manage short-lived climate pollutants that are deemed significant. Aviation industry needs to prioritize energy efficiency and operational measures. Sustainable alternative fuels have a role to play in reducing the sector's emissions. Some second-generation biofuels, derived from plant and animal wastes and residues, demonstrate potential to substantially reduce emissions on a lifecycle basis while avoiding significant competition with food and land availability.

During ICAO's next rulemaking cycle, 2019- 2022, countries should agree to greatly increase the stringency of this standard and make cut-off date for the production of current aircraft earlier than what it is currently in the existing ICAO CO_2 standard. The ICAO CO_2 standard adopted in 2016 has been rendered ineffective due to low stringency for new aircraft designs and a cut-off delay for the production of current aircraft until 2028. This is especially problematic given the long operational lifetime of aircraft, which can be 20-30 years. ICAO Carbon Offsetting and Reduction Scheme for International Aviation (CORSIA) aim to achieve carbon-neutral growth from 2020 for international aviation. CORSIA is expected to cover 78% of the sector's CO_2 emissions above 2020 levels for the duration of the scheme, from 2021-2035. This amounts to an estimated 21.6% of the sector's emissions over this period. Importantly, emissions reductions are subject to the quality of offsets and alternative fuels allowed in the scheme, the establishment of robust accounting within the Paris Agreement and effective enforcement by states. As of now, CORSIA only covers 21.6% of international aviation emissions over the period 2021-2035; however, governments in ICAO could decide to use CORSIA to step up ambition during the first review. One concrete way to increase the ambition of CORSIA is to change the carbon-neutral growth target such that CORSIA is delivering an absolute net emissions reduction.

The ICAO Council's Committee on Aviation Environmental Protection (CAEP) conducts the majority of ICAO's environmental technical work and has developed a range of Standards to address air quality. The CAEP is currently focused on developing an Aircraft CO_2 emissions Standard which was a recommendation from the ICAO Program of Action on International Aviation and Climate Change, as part of a set of measures to reduce greenhouse gas emissions

from the air transport system. ICAO Doc 10031 is to provide States, airport operators, Air Navigation Service Providers (ANSP) and other stakeholders with environmental assessment guidance to support decision making when analyzing proposed Air Traffic Management (ATM) operational changes.

Aviation industry is growing in a steady manner at the present situation in Nepal. International Flight Movement and Passenger Movement increased by 29.73% and 11.50% respectively. Looking at the trend in Domestic Sector, Flight, Passenger as well as Cargo movements have increased by 37.68%, 45.87% and 9.56% respectively in 2017. With increase in the flight movement, the carbon footprint has also increased. Yeti Airlines, one of the major service provider in Nepalese aviation, in partnership with United Nations Development Programme (UNDP) has formally initiated the process to transform itself into a carbon neutral airline. The preliminary carbon footprint report shows Yeti Airlines produced 18,113 tons of CO_2 equivalent emissions in 2017 mainly from aircraft fuel consumed to service the cities. This total equals the amount of carbon sequestered by approximately 470,000 trees over 10 years. The emissions from air travel accounts for nearly 100% of the company's emissions. Between 2016 and 2017, the CO_2 emissions per km decreased by 7% while the CO_2 emissions per passenger decreased by 11% due to a more efficient fleet.

Nepal's action plan to reduce greenhouse gas emission from aviation, describes ongoing and planned activities. These measures will help Nepal to plan and action on activity that will reduce the operational cost providing clean atmosphere to meet the ICAO goals.

In order to reduce GHG emission from Nepalese aviation sector, Nepal has set a target of:

a. Average annual improvements in aviation fuel efficiency, by revision of the air route and navigational aid installed in different airports of Nepal.
b. Construction of other international airport that reduces air distance covered in Nepal.
c. Reducing air traffic holding and diversion.

Traveling through the air sometimes comes as a necessity, but has a particularly potent effect on the greenhouse effect. One round-trip across the country can actually release about one-fifth of the greenhouse gases. There is a growing trend of switching to biofuels on the part of airlines, which is meant to cut back on the total emissions brought about by flying. Though it can be difficult to find an alternative option to flying, there are ways to reduce your environmental impact because of it. You can consider flying less frequently, if you do so more as a luxury than as a need. You can also try and offset the damage your flying does by paying for environmental offsets, like tree replanting. This can even be done through some airlines who are trying to focus on more environmentally friendly practices which include a four-pronged approach to tackling carbon emissions: fleet renewal, operational efficiency, the implementation of biofuel and offsetting.

A Study of Job Satisfaction and Employee Motivation at Civil Aviation Authority of Nepal

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Background

Living in the 21st century and coping with society being in constant movement, makes managers of today's businesses wonder how to retain their most valuable employees. Terms like motivation and job satisfaction are being looked closer upon, and many of today's best managers are genuinely interested in what their employees are thinking. Today's companies operate in a competitive environment at a global level and are forced to do everything on the market to become and remain competitive. In view of such a situation, it is crucial that management takes care of employee satisfaction, which is a key factor for organizational effectiveness and efficiency and for the successful implementation of the corporate strategy (Bigliardi et al., 2012).

Relevance of this topic is becoming more important in modern management given the importance of motivation at work. Motivating employees is considered as one key factor that can create the power in making workers feel satisfied with their jobs. Employer can only motivate workers in the form by creating the conditions and environment that make people feel happy and satisfied to give their heart and soul to the job and the company. The contributions from the employees are key determinants of any organizational success and it is closely linked to creating highly motivated workforce that encompasses great job satisfaction among the employees. So is this just a perception or is employee job satisfaction really linked to employee motivation whereby employee will be more devoted and intellectually more active in working on their job assignment? The result generated the following research question:

(a) Which motivation factors for worker's job satisfaction?
(b) Does top management involve subordinates and others employee in decision-making?
(c) How does the team leader influence team in teamwork?
(d) Does employee get the required tools and techniques to perform work?
(e) Do employees have freedom in decision-making at work /work place?
(f) How does employee's family and friends take the organization?
(g) Is there system of rewards and punishment?
(h) Does an employee get salary and additional incentives as per expectation?
(i) Are employees satisfied on training, retraining, research and study work provided as office?

2. Methodology

The study found it appropriate to use a descriptive research design. This study is concerned with finding out what factors influence employee motivation and job satisfaction and are qualitative in nature.

The main source of data for this study is primary source. Currently about 885 employees are working in CAAN as permanent employee (both officer and non-officer). This study is covering more than 10 percent of employee i.e. 102, including from different age group, professional, work experience, level, gender and marital status (though this analysis is only for qualitative independent variables to aggregate data). The questionnaire including 28 key questions distributed and as far as possible, elements of the sample are collected by using simple random sampling from different offices and departments under CAAN.

Data was edited to check for missing sections, what was not necessary was deleted as deemed appropriate. The data was then coded by attaching numerical value to every qualitative data. Data was cleaned and errors corrected whenever possible.

Statistical Package for Social Science (SPSS) was used to analyze data using descriptive statistics, where minimum, maximum, mean, standard deviation (SD) was used to analyze the data. Data was analyzed using scales such as ordinal or nominal. The analyzed data was then presented by way of figures and tables including pie chart and histogram.

3. Job Satisfaction among the Employee of CAAN

On the basis of 102 respondents (employees) from the Civil Aviation Authority of Nepal, with questionnaire including 10 questions as independent variables (in questionnaire filled) to determine the level of job satisfaction in CAAN.

Table 1: Mean and standard deviation value for independent variables

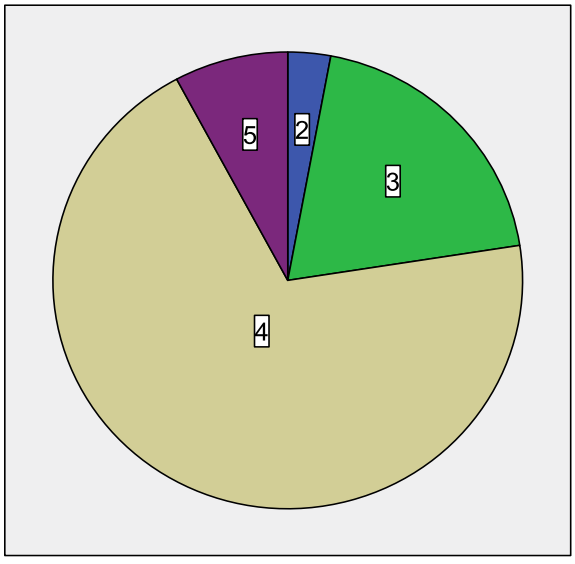
Variables	N	Minimum	Maximum	Mean	Std. Deviation
Works as qualification/skill (QN7)	102	1	5	3.75	.909
Tools and resources at job (QN8)	101	2	5	3.86	.617
Individual success in team (QN9)	101	2	5	4.13	.611
Continuous feedback (QN10)	102	2	5	3.77	.688
Participation in decision (QN11)	99	1	5	3.15	.952
Satisfied with top management (QN12)	100	2	5	3.21	.808
Image of CAAN (QN13)	102	2	5	3.85	.636
Overall quality of service (QN14)	98	1	5	3.83	.674
Switching of new job (QN15)	99	1	5	3.61	.855
Overall job satisfaction (QN16)	102	2	5	3.82	.604
Valid N (listwise)	92				

Source: Field Survey, 2018

(5="Strongly agree", 4= "Agree", 3= "Neutral", 2= "Disagree", 1= "Strongly Disagree")

From table 1, QN 9 that is individual's performance directly influenced to the success of the team is stronger than others are. The higher mean value 4.13 and lower Standard Deviation 0.611 shows that each staff is directly connected to the success of team. All most all indicators are above neutral and few indicators have minimum value strongly disagree but the maximum value for each is strongly agreed. Due to this almost employee are satisfied with their job, it proved by QN16 as well, which is concerned with the overall satisfied with job, the mean value is nearly 4 and SD is 0.60.

Figure 1: Pie chart for overall job satisfaction leveling

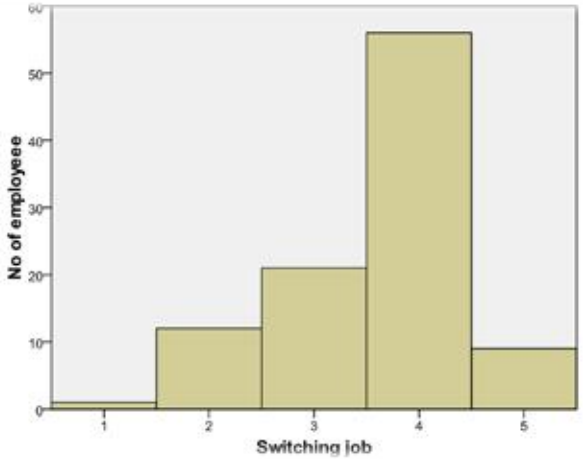


Source: Field Survey, 2018

(5="Strongly agree", 4= "Agree", 3= "Neutral", 2= "Disagree", 1= "Strongly Disagree")

From the figure 1, about 66 percent of total respondents are voting on agree regarding to overall, I am satisfied with my job. About 20 percent are neutral, about 10 percent strongly agreed and the least that is about 4 percent are satisfactory. From this analysis the job satisfaction among the employee of CAAN is very high.

Figure 2: Histogram for switching job



Source: Field Survey, 2018

While, Analyzing for switching new job among the employees of CAAN, out of 102 employees, only few employees less than 5 are on the mode of switching job. About 12 employees are ready if they get better opportunities. About 25 are neutral. About 55 are disagreeing and about 10 employees are strongly disagreeing. Nearly 90 percent of CAAN employees are not interested for switching new job. This Analysis shows that the employee of CAAN satisfied with their job.

4. Situation of Work Motivation at CAAN

Motivation is a complicated matter and is viewed as an individual thing influenced by many factors. There were many changes in individuals and are conflicting in terms of expectations and needs which involve in many different ways for them to be satisfied. The factors extracted from the aspect of extrinsic motivation were job freedom, future at organization, reward and remunerations, etc. that would contribute to job satisfaction. Based on this QN17 to QN 26F was designed and this is the information collected from 102 employees of CAAN.

Table 2: Mean and standard deviation for independent variables

Variables	N	Minimum	Maximum	Mean	Std. Deviation
Appreciation & reward (QN17)	98	1	5	3.16	.833
Freedom at work/work place (QN18)	102	1	5	3.41	.813
Training, study and research (QN19)	102	1	5	2.25	.941
Bonus and incentives (QN20)	102	1	5	2.56	1.157
Benefit from CAAN (QN21)	102	1	5	2.92	.829
optimistic on success of (CAAN QN22)	100	2	5	3.69	.677
self-motivated (QN26A)	99	2	5	4.33	.670
public recognize job (QN26B)	98	2	5	4.13	.713
work based pay (QN26C)	98	2	5	4.11	.798
education and training (QN26D)	100	1	5	4.31	.720
Job Rotation and Job Enlargement (QN26E)	100	1	5	4.15	.821
cooperation, coordination, communication (QN26F)	100	2	5	4.43	.671
Valid N (listwise)	94				

Source: Field Survey, 2018

(5="Strongly agree", 4= "Agree", 3= "Neutral", 2= "Disagree", 1= "Strongly Disagree")

Out of 102 respondents, for some questionnaires, few respondents were not interested to response the questions. However based on the sampling as shown in information on table 2, the employees are not so satisfied on motivational tool like training, retraining, study, research, bonus, incentives, and extra benefit from CAAN such as loan facility, facilities for their children etc. which is reflected in QN19, QN20 and QN21 having average value less than 3. It means they are not getting these motivational facilities therefore value is less than neutral. Rests of the variables are more positive. The analysis of each variable is studied on the following manner.

(a) Appreciation and Reward

Employees get appreciation and reward when the desired work/targets are accomplished. Appreciation and Reward motivates employee on work. As regards 4 percent strongly agreed on it, about 29 percent are agreeing, 45 percent are neutral, nearly 18 percent disagree and 2 percent are strongly disagreeing. Nearly 50 percent respondents are neutral and more than 30 percent are on the favor of this so appreciation and rewards is needed in CAAN for motivation but not strongly.

(b) Job freedom/flexi

Freedom and flexi at work highly motivates employee. While questions are raised as the supervisor / senior manager gives freedom, do you need to do your job effectively to 102 employees, 6 percent are strongly agreed, 44 percent are agreed, 39 percent are neutral, 12 percent are disagreeing and 1 percent is strongly disagreeing. After analyzing this job freedom and flexi at work is better in CAAN. Most of the employees are getting flexi and freedom at work.

(c) Training, retraining, study and research

Based on this the question like how satisfied are you with the training, retraining, study and research opportunity at your office which has been asked to the employee; 3 percent strongly agreed, 4 percent agreed, 30 percent neutral, 41 percent disagreed and 22 percent strongly disagreed on this. It shows that the position of getting training, retraining, study and research at CAAN is very poor. This motivational factor is needed to be improved at CAAN.

(d) Bonus and Incentives

Bonus and Incentives are major motivational factor for employee at work. Regarding this the question like are you satisfied with the bonus and incentives given, asked to the employee of CAAN. Out of 102 respondents, nearly 2 percent are highly satisfied on it, 24 percent are satisfied,

28 percent say needs improvement, 23 percent are unsatisfied, 25 percent say no provision. Based on the finding this motivational factor also poor at CAAN. About 75 percent of employee is below than unsatisfied level regarding on the issue.

(e) Benefit from CAAN in front of other organizations

How do you find the CAAN's benefits compared to other companies' benefit in the organization? 102 answered it, among them 1 percent says excellent, 25 percent say very good, 44 percent say good, 29 percent say satisfactory and 3 percent are unsatisfactory. This study shows that about 70 percent employees are positive on getting benefits form CAAN in front of other organization. Nevertheless, almost all employees are expecting further improvement on this factor.

(f) Future at CAAN/ Job secure

If an employee thinks about own success at organization in future, Job is highly secured, it means he or she does a lot for the organization. If not so employee could be de-motivated towards the work. Regarding this issue the question like I am optimistic about my success with the CAAN, 7 percent are strongly agree on it, 58 percent are agreed, 28 percent are neutral, 2 percent are pessimistic. It shows Job is highly secure in CAAN and future is good in CAAN. This encouraged the employee at work.

(g) Extra earning

Earning from over time duty and pay leave motivated employee on work, where as 23 percent employees do not earn as an extra, 21 percent employee earn about 20 thousands similarly 25 percent employees earn 40 thousands, 24 percent employee earn 75 thousands and there are nearly 5 percent employees who earn 125 thousands per year in an average.

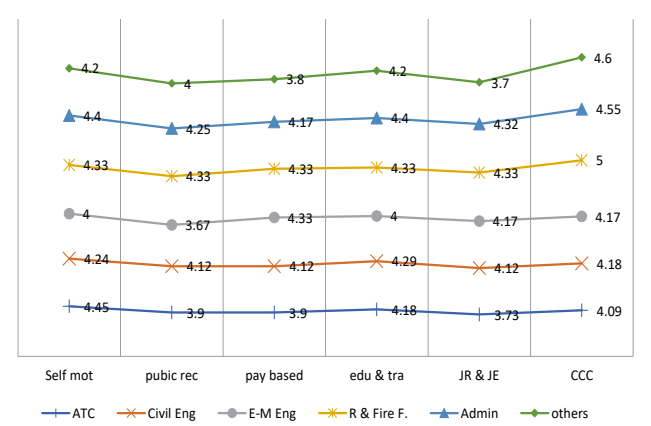
(h) CAAN employees agreed the following factor as motivational tool on the following manner.

Table 3: Considering motivational factor at CAAN with weight

Motivational Factor which shall be considered at CAAN	No. of Respondents out of 102 (%)					Remarks (No response %)
	Strongly agree	Agree	Neuatral	Disagree	Strongly Disagree	
	5	4	3	2	1	
I consider myself a self-motivated person	41.16	49	4.9	1.96	0	2.94
I work harder on a project if public recognition is attached to it	29.4	51.94	12.74	1.96	0	3.92
I would work harder if I knew that my effort would lead to higher pay/salary	32.34	46.06	13.72	3.92	0	3.92
Personnel development by education and training, etc. motivated more	41.16	49	5.88	0.98	0	2.94
Job rotation and Job enlargement provides more motivation.	36.26	44.1	14.7	1.96	0.98	1.96
Coordination, cooperation & good communication among employee also considering motivational factors.	50.96	39.2	6.86	0.98	0	1.96

More than 90 percent employees considered above factors is motivational factor in work at CAAN. Self motivation enhance the expected output similarly public recognized work, work based pay, education , training, job rotation and enlargement, coordination, cooperation, good communication among the employee have positive effect at work. Due to which employee are highly motivated.

Figure 3: Motivational factor agreed by professional group



Source: Field Survey, 2018

[self mot= self motivated, pubic rec= public recognize job, pay based= work based pay, edu & tra= education and training, JR &JE = Job Rotation and Job Enlargement, CCC= cooperation, coordination, communication among employee]

(Where, ATC= Air Traffic Controller, Civil Eng= Civil Engineering, E-M Eng= Electro- Mechanical Engineering, R & Fire F. = Rescue and Fire – Fighting, Admin= Administration, others = IT/ Aeronautical engineering, Electro-communication engineering/ Radio etc.)

From above figure 3, when we study about self-motivated factor, the ATC group is more self-motivated and E-M engineering group is less self-motivated. If we connect our job with public reorganization it creates motivation on work, Rescue and Fire-Fighting group strongly agree on it. Work based pay, it highly motivated to electromechanical engineering group and Rescue and Fire Fighting group; less motivated the ATC group. Education and training more motivated to Administration group and comparatively less motivated to electromechanical group. JR and JE highly motivated to Rescue and Fire Fighting group. Lastly, Coordination, Cooperation and good Communication in group highly motivated to Rescue and Fire Fighting group and others group and comparatively less motivated to ATC group.

5. Conclusion

The basic condition for successful management of employees in the organization (CAAN) is reflected in the support for high motivation and satisfaction of employees at different ages and professional group. Positive changes for diverse employees in the workplace will increase work performance. Motivated and satisfied employees tend to retain a high level of innovation, higher-quality work, and a higher level of efficiency. For all level employees, high motivation and satisfaction in the workplace could be essential for dealing with changes in working capabilities and have a significant impact on the well-being of diverse employees. Monetary and non-monetary factors are equally influencing to create motivation for employee in the workplace. Monetary motivational factors such as extra earning in terms of incentive and bonus, allowances, more number of paying leave, work based pay etc. motivated employee more. The non-monetary factors such as Job secure, training, job freedom and flexi, study leave, job rotation and enlargement, coordination and cooperation, good communication among the employee enhance high motivational level among the employee.

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The need of an Autonomous Civil Aviation Academy in Nepal

Aviation industry is growing day by day in Nepal as well as in the global context. Following figure shows the data of growth of global aviation industry in the year 2017 A.D

(Source: https://airlines.iata.org)

In the same way, Nepal is also facing regular growth of air traffic and passengers in the recent years both in international and domestic sectors. Tribhuvan International Airport handled 23520 international aircraft movement whereas this figure was rocketed to 27118 in the year 2016. In TIA, the number of international passengers in 2012 was 2925117 whereas this number reached to 3510742 in the end of 2017. In the same pace, cargo movement also increased in Tribhuvan International Airport. The quantity of annual cargo movement in TIA was 14230.42 tons in the year 2012 whereas this quantity was reached to 20348.94 tons.

The growth of air traffic and passengers was same in the domestic sector as well in Tribhuvan International Airport. The number of domestic aircraft movement in TIA in the year 2012 was 70877 which was rocketed to 73876 in the year 2016. In this period the size of fleet was also increased by domestic airlines in Nepal. During this period, number of domestic passengers was increased from 1575059 to 1757596 whereas

cargo movement was increased from 3415371 tons to 3951321 tons. (Source: CAAN Annual Report 2017) Thus, this significant growth in aviation industry demands highly competitive human resource in the country.

It is known fact that aviation is a multi-technical sector and it requires professionals from almost all sectors. It is because aviation business touches various sectors and it demands professionals from various sectors be it lawyer or doctor. Amongst them, pilot, air traffic controllers and engineers lies at the core circles as they play vital role in aviation operation standing in front lines. As aviation is multi technical and is being sophisticated day by day, it requires competent human resource having ability to cope up with recent updates and developments of aviation, be it technology or procedures. That's why, its need of time to establish modern and well facilitated institutes that can produce competent human resource in the modern aviation market. Highly competent human resource can greatly enhance safety, security, efficiency and reliability of aviation and thus contributing to achieve ICAO's principle objectives.

As aviation sector requires highly specialized human resources, it is a normal international practice that aviation regulatory authority develops different norms and standards regarding aviation academies and institutes in order to maintain quality of produced human resources. Based on these standards, different professional institutes and academies are established to produce competent aviation professionals both in private and government entities. In some countries, different universities run aviation courses either academic or professional courses. And in some countries, university and aviation service providers collaborate each other to produce aviation professionals in accordance with the demand of market.

International Trends and Practices

To meet the growing demand of competent aviation professionals worldwide, highly competitive aviation institutes are established. These institutes attain an autonomous and national status. Normally, an academy having an autonomous status is developed by central government as a center of excellence to meet the demand of aviation industry form national authorities to smaller service provider. It is also a recent trend that a national level civil aviation academy is developed in collaboration of all stakeholders of aviation industry in order to supply human resources to those companies and authorities. In some countries, those civil aviation academy is run by central government as a civil aviation university.

We can simply adopt an example of our neighbor India. In India, the then institute of Airport management started its operation in 1986. It was renamed as National Institute of Aviation Management and Research (NIAMAR) in 1997 and functioned as such until 2010.

Later on a memorandum of understanding (MOU) was signed with Bureau of Civil Aviation Security (BCAS), Directorate General of Civil Aviation (DGCA) and Airports Authority of India (AAI) to have a joint venture to form a new autonomous body for augmenting the training activities in the civil aviation sector of the country and also to impart knowledge to other stakeholders.

Indian Aviation Academy has been established under aegis of National Institute of Aviation Management and Research Society, which was established under societies Act 1860 on 22 July 2010. It aims to develop itself as center of Excellence in the area of Education, training and research in Aviation in Asia Pacific Region.

Indian Aviation Academy is a Premier training institute in the field of Aviation Management. It works towards developing the skills of a large pool of manpower of Airports Authority India, Bureau of Civil Aviation Security and Director General of Civil Aviation through technological advancement and consequent refinement of operating standards and procedures including new standards of safety, security and management techniques.

Indian Aviation Academy has been approved by ICAO as “Aviation Security Training Centre” to conduct Global Training programs on Aviation Security. For aviator i.e. pilot training, India is running government aviation training Institute (GATI) at government level.

Airport Authority of India runs its own civil aviation training college (CATC) for the production of air traffic control Officers and CNS safety personnel. Likewise, other service providers have their own training center. However, an autonomous center of excellence Indian aviation academy is running as national institute of aviation.

In the US, FAA academy is run by Federal government of USA. It has an autonomous status. It has state-of-the-art facility and is center of excellence that has trained international participants from 172 countries. This institute received accreditation from the North central Association (NCA) of colleges and schools.

In the European countries, there is increasing trend to establish a national aviation academy having an autonomous status and organization structure. These academies collaborate with universities and other aviation stakeholders in order to supply competent human resources to the market and to do the research in aviation policies so that they can provide feedback to national aviation policies and development. Even in

Europe, there is growing trend to establish specialized aviation universities in collaboration of government and non-government stakeholders. Griffith University, French University of civil aviation are some of such type of universities.

National Scenario:

Currently, civil aviation authority is in the role of both regulatory authority and airport service provider. CAAN is operating civil Aviation Academy (CAA), under its own organization structure, which is located in Sanothimi, Bhaktapur. This is only civil aviation training center run by government till date. As this academy is running under the organization structure of civil aviation authority of Nepal (CAAN), this is not an autonomous body. In one hand, it is not an autonomous body and in other hand, the academy is not seen as professional center of excellence. It is because of various factor, one of them is due to its organization structure.

As the organization structure of civil aviation academy is not an autonomous and is not distinct with that of CAAN, the human resource and overall development plan can't be executed in a professional manner. For e.g. the trainer working in the civil aviation academy are transferred to different station with entirely different duties and responsibilities. Likewise, an officer working in different station having different responsibilities and without any experience of trainer are deputed as the trainer to train trainees after more than around 15 years of entry in civil aviation sector. This system is blocking young and energetic aviation professionals to become a competitive and professional trainer. Also, this system can't get well competitive and professional leadership because the leadership nature of academic and research organization is entirely different from that of other entities.

At present, Civil Aviation Academy is running training programs especially for ATM and CNS personnel working in the CAAN. Sometimes, it is running some programs for administrative personnel and for human resources working in other relevant organization as well. However, we have to accept a bitter truth that the quality of civil aviation academy is not so high so as to meet the demand of the changing world of aviation. Because of this scenario, Nepalese aviation sector have to feel shortages of professionals and competitive human resources. On the other hand, Nepal is unable for catching an opportunity to earn foreign currencies by developing an autonomous national civil aviation academy as a center of excellence. Nepal's moderate climate and enchanting natural beauty adds more probability for this opportunity. That's why, we can say that there is high need of an autonomous national aviation training center with state of the art facilities, having share of aviation authorities like: CAAN and Ministry of Culture, Tourism and Civil Aviation. This helps to make aviation of Nepal more professional.

Future Benefits:

As Nepal is growing in aviation industry, had there been an international standard aviation academy there would have easy fulfillment of competent human resources in the national aviation industry in Nepal.

If such integrated aviation academy is made 'center of excellence' then it may attract trainees from other countries as well so that 'education tourism' would have been promoted. That's why, this can help to boost economy of the country. If quality of national level institute is enhanced, it is obvious that quality of human resource produced from that institute would be enhanced. This can ultimately enhance efficiency and safety of overall aviation industry of the country. This situation directly affects the output of civil aviation industry of the country. Also, on the other hand, this brings uniformity in syllabus and quality of trainings provided to aviation professionals. Thus, it will be a prudent act to establish such integrated aviation academy in the country.

Conclusion:

As, the organization structure of civil aviation academy is not distinct and separated from other departments of CAAN, the trainer, executives and other personnel are transferred from different departments of CAAN and vice versa. This situation necessitates an autonomous, integrated center of excellence, a national level aviation academy in the country in order to fulfill demand of competent human resources in the field of civil aviation in our country. This can help to boost aviation based economy in the country. That's why, state should be serious in this issue to establish such national level institute in the country for balanced and sustainable development of aviation in the country. Thus, we can say that this is a basic requirement in order to boost aviation of Nepal to an international standard.

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SIA From Kathmandu Tower

Rabin Subedi
Sr. Officer, CAAN

When Nepal discovered Nijgadh as a lucrative location for International airport after pre-feasibility study of eight possible places for Second International Airport around 1995 AD, from then till today many initiatives for constructions of airport have become indecisive. Though detailed feasibility study, land acquisition, resettlement of houses, etc. are on progress still so little work seems to be accomplished of such a dream project which could change Nepal's development and economy since last twenty three years. May be Tribhuvan International Airport, the only International airport of the country is doing its best with what it has or there is widespread apathy among decision makers but with the rise in air travel globally, air passenger's movement is also growing year by year in Nepal.

4.1 billion Passengers were carried by the aviation industry on scheduled services in 2017 globally which indicates a 7.1% increase over 2016. The number of departures rose to approximately 37 million globally in 2017. As per International Civil Aviation Organizations (ICAO), a UN body, "global air transport network" doubles in size at least once every 15 years, and it's expected to do so again by 2030 A.D. Tourist along with millions of Nepalese working, living or studying abroad travelling to Nepal contribute to the increasing number of traffic. TIA, where 523 traffic movements hit the record in the month of October in 2018, is struggling to handle passengers as well as air traffic due constraints of ground space as well as unexpandable geographical location. Almost all my friends, relatives and people whom I visit returning from abroad have innumerable flaws of the only international airport of Nepal. So the country where Gautam Buddha was born and where world's highest peak Everest is located, desperately wants Second International Airport big enough to handle any number of aircraft and people with all modern facility installed.

Building Second International Airport, which is probably so far Nijgadh International airport has no alternative. The news in media and in our social walls are sometimes spread in such a manner that it feels like flying direct from Sydney or John F. Kennedy airport to Nijgadh is not far. If built, the world class airport will not only welcome more than expected tourist but will also stimulate foreign investment and international trade. New airport is planned to have cargo flights with related cargo terminal, hanger and yard of modern age. Often talked aim of Nepalese government to bring two million tourists per year by 2020 and celebrate it as Visit Nepal year is only possible with the construction of such huge project and also under constructions airports like Bhairahawa and Pokhara will also play significant role.

Geographically new airport is located in almost center of the country so people from every direction can have easy access. Also the southern border point would be more accessible for a large population of Bihar, India. Much talked and also most awaited east-west railway service and under construction Kathmandu-Terai fast track will make Second International Airport closer to every people from every corner of the nation. Huge land area of 80 Sq. Km and airport about 23 Km north from Indian border will help to establish any facility of modern age and to provide open air space without infringement. High terrain obstacles will not be problem in SIA. Transportation of aviation fuel will be easy to Nijgadh as major portion of country's aviation fuel enter via Birgunj custom (around 45 Km to Nijgadh) from India, whereas established industrial area around the airport can boost up its product to international levels with international flights. Well so much benefit and beneficiary are associated with Nijgadh airport; I as an Air Traffic controller (ATC) working from country's only international airport tower sometime think of completion of Second International Airport (SIA) and dream about what would be working like there.

The biggest airport hub in south Asia in terms of area will have two runways which will be firsthand experience for all controllers because there are no two runways in any airport of Nepal and we can compare us to the world busiest airport like Heathrow London, Hong Kong and Dubai Airport having similar parallel runways. TIA is sometime compared with single runway Mumbai airport when it lacks in providing services. The single runway limitation and airlines policy to fly from only particular runway heading creates sometimes chaos in the only international airport of Nepal. SIA will be free from such ambiguity of runway changes and limitation. 3600*160m dimension runways shall

be aircraft friendly and acceptable to any types of aircrafts. The very small project of parallel taxiway which could minimize the much talked delay of TIA significantly is still untouched and under question. Such unanswered question shall not be heard in Nijgadh, where we shall have multiple parallel taxiways, link taxiways and many holding points, etc. The tower definitely will be of modern architect and hold some records like tallest ATC tower and best designed ATC tower etc .Ground control shall be hardly possible from visual reference where surface movement radar may be used. Simultaneous pushback and arrival of heavy aircraft will not be problem in SIA. International traffic should not always expedite to lineup for departures. I guess one runway for departures and other parallel runway for arrival will significantly reduce delay. There may enough parking bay to accommodate any numbers of flights. Visibility shall not be problem for operations as highly sophisticated navigation system and ground based technology will guide aircraft to the runway when a visual approach is not possible. TIA due to lack of sophisticated ground based technology is compelled not to make arrival in foggy seasons when visibility comes below 1100m.

ILS landing system where aircraft land in minimum visibility

Weather radar installed will provide detail forecast. TIA controllers are forced to read the METAR when aircraft suddenly ask about our prediction about bad weather. Proper separations of airspace may be fully launched which will reduce VHF congestion ultimately increasing on-time departures. The category 4F airport will welcome the aircraft as heavy as passenger airbus 380. Controllers now can have knowledge of performance of any type of aircraft in the world.

International flights not being able to land at Kathmandu can now divert to shortest alternative airport Nijgadh, which now days either divert to Lucknow, Calcutta, Dhaka or Delhi. Also traffic not being able to proceed to destinations due various reasons from adjacent FIR can also divert to Nijgadh. Whatever may be the reason we can generate revenue. All arriving and departing routes may be performance based. Area Control Center will be quite busy, with the rise in overfly traffic with the introduction of new entry point and air routes. Proposed trans-Himalayan routes may be fully effective with the establishment of new airport as communication and surveillance facility has been already considerably improved. Authority will have ample opportunity to earn from aircraft for air navigation services during a flight over territory. Air Traffic Flow Management (ATFM) can be fully implemented as there will be least problem of limitations and also other technical issues.

The airport may have enough facility for controllers to refresh and rejuvenate. By the time the Second International Airport begins operations, hope we are at the hand of the great service provider who pays more than what we get today. ATC by job nature is stressful and also highly sophisticated. Training and perks, refreshment etc might be on regular basis by which controller can enhance their performance. The provision of air traffic control service has evolved from a simple issuance of signals of flag, to the use of advanced technology and procedures which allows the growing number of aircraft that cross the skies to be separated. Skilled professionals like controllers are making key contributions to aviation being the part of global community. Globally there are more than 50000 air traffic controllers and in Nepal we are more than 200.

Nijgadh International airport will be an air hub joining 27 Asian cites as there is sharp rise in demand for flights across Asia and generate over 100000 jobs according to Landmark Worldwide Company (LMW). It has the potential to establish Nepal as a transit hub. This international airport can create thousands of opportunities and can also change the fate of the country. With such a mega project to start every aviation personnel might be thinking of their career to rise to a different level. Let's hope all ongoing controversy for the development of the proposed full-fledged international airport in Nijgadh will end soon and our dream to work in Second International Airport will come true within proposed time.

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Administrative Prespective Towards CAAN

Renuka Satyal
Officer, CAAN

It would not be an exaggeration to say that the administration of Civil Aviation Authority of Nepal was overshadowed and now is beginning to undergo change and it should be considered as a rebirth of CAAN Administration. One can imagine eventual shifts in the set up and framework of the organization structure as public seek out more rational, responsible and accountable CAAN for effective and efficient service delivery.

Administration is the process of organizing people and resources efficiently and effectively, so as to direct activities towards common goals and objectives. It involves act of coordinating and overseeing the work activities of others so that their activities are completed in a better way. Administrators engage in a common set of functions to meet the organizations goal. It is assumed that administrator is one who directs the activities of other persons and undertakes the responsibility for achieving certain objectives.

Since, Nepal is a land locked country, air travel is particularly suited to Nepal with its hilly and mountainous territory and varied terrain. Nepalese civil aviation has its main objectives of air transportation which mainly handles passengers, cargos and mail traveling on both scheduled and nonscheduled routes and special-purpose aviation, which mainly serves industrial and agricultural production. The aim of civil aviation in Nepal have been primarily to extend air routes, to strengthen the link between other countries and as well as remote border and interior areas, to develop special-purpose flights serving the needs of agriculture, forestry, and geologic prospecting and to increase the number of large transport airplanes.

Nepalese civil air efforts are carried out solely by the state-owned Civil Aviation of Authority of Nepal (CAAN). In an effort to improve efficiency and service, regional airports are under construction and an alternative for the one and only international airport is in construction phase.

Regarding administration, every successful administration is supposed to have three basic skills: technical, human and conceptual.

1. **Technical Skills:** Administrative employees have to operate a variety of technological tools, ranging from Microsoft Office to online. They also have to use and often maintain office equipment such as faxes, scanners and printers. As used here, technical skill implies an understanding of and proficiency in a specific kind of activity, particularly one involving methods, processes, procedures, or techniques. Technical skill involves specialized knowledge, analytical ability within that specialty and facility in the use of the tools and techniques of the specific discipline.

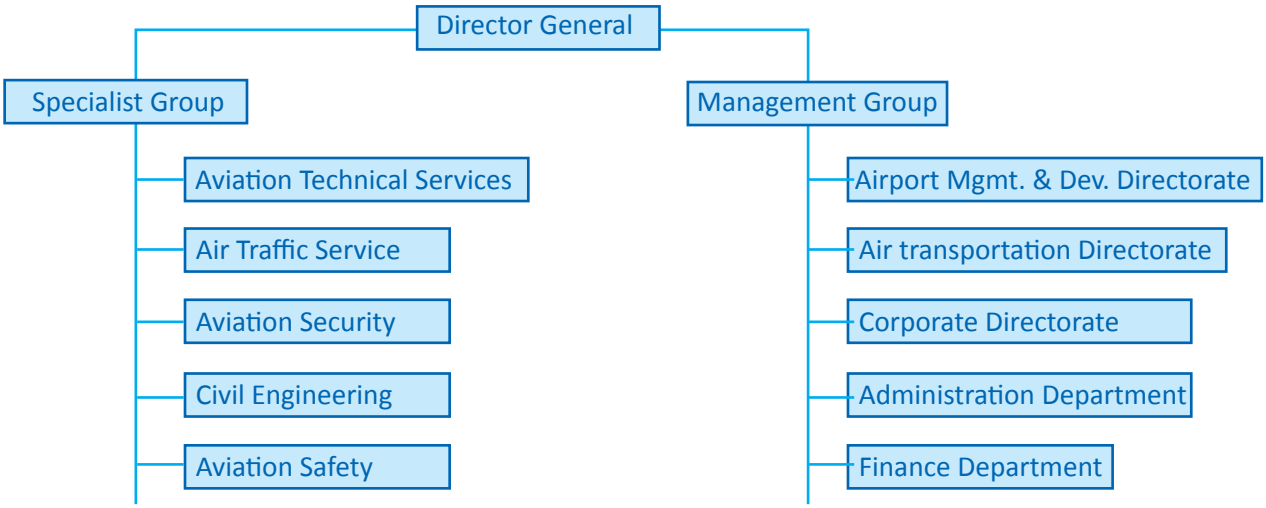
2. **Human Skills:** Employees who are aware of their own attitudes, beliefs, and perceptions about other individuals are considered to have highly developed human skill. They can easily accept others view points and can open up with the working environment. It is concerned with working with individual's perception that is how he/she perceives his/her superior colleagues and subordinates and in the way he/she behaves subsequently. All in all, it is needed for effective communication.

3. **Conceptual Skills:** It includes analytical, creative and initiative skills. It involves the ability to think creatively and understand the problem and issues of the organization. It sees the individual in relation to their culture, community, social and economic background.

CAAN's Administration

CAAN has two groups under Director General. One is specialist group and other is management group. Administration department falls under management group. Specialist group are like Air Traffic Services, Aviation Security, Civil Engineering and Aviation Safety. On the other hand, Management Group has Airport Management and Development, Air Transportation, Corporate Directorate, Administrative and Finance Department.

CAAN's Administration



Role of Administration in Civil Aviation Authority of Nepal

1. Using excellent customer service skills to deal with service users.
2. Interpreting and applying complex written information relating to policies and procedures.
3. Managing and working efficiently with resources, often on a limited budget.
4. Using communication skills, both oral and written to explain complex information to colleagues and members of the public achieving and delivering results within deadlines.
5. Working quickly under pressure, often according to complex rules and procedures.
6. Helping to formulate and implement policies.
7. Researching and carrying out analysis relating to particular areas of economic or political interest providing evidence based on research and delivering findings to senior staff members, which may eventually feed into future policy work taking an impartial interest in economic and political issues.

Problems to play the afore-mentioned roles

1. Inferiority complex in administrative staffs.
2. Weaker administrative policy.
3. Poor human resource management.
4. Weaker intermediary role.
5. Fails to nurture positive relation within the organization.
6. Insufficient investment in training of administrative staffs.
7. Unequal distribution of budget.
8. Status-quo mentality in working environment.
9. Incompatible selection criteria between technical and administrative employees.
10. Huge gap between technical and administrative manpower.
11. Sense of frustration, monotonous working environment, fear, pressure and domination in employees.

Solutions:

1. It should be broadened and widened.
2. It should embrace the gap between admin and technical employees.
3. Selection and recruitment of highly qualified and skilled manpower.
4. It should decentralize decision making process.
5. The scope of the changes underway should not be limited- as traditions and mindset regarding administration.
6. Time to time counseling and motivation to admin staffs.
7. Internalization of the importance of administration of in CAAN.
8. Restructuring of organizational chart.
9. Staffing based on person-job and person-organization fit.
10. Trainings program to develop knowledge, skill and abilities.

Conclusion:

All in all, administration is inexorable for both construction and destruction so it is the back bone of every organization. CAAN must try to amalgam the essence of an administration that is planning, organizing, leading, controlling and getting competitive advantage.

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सार्वजनिक निकायमा उत्तरदायित्व

भीम राज उप्रेती
अधिकृत, ने.ना.उ.प्रा.

अवधारणा र अर्थ :

जिम्मेवारी तोकिएको काम कारवाही सम्पादन गर्ने क्रममा सार्वजनिक पदमा रहेका व्यक्तिहरुले आफूले सम्पादन गर्ने कामहरुको बारेमा सम्वन्धित पक्ष वा सरोकारवाला निकाय वा नागरिकलाई पारदर्शी रुपमा सुसूचित गराउने दायित्व वा गहन जिम्मेवारीलाई सार्वजनिक उत्तरदायित्व भनिन्छ । सार्वजनिक निकायमा उत्तरदायित्व भन्नाले नीति, काम, कार्यक्रम, निर्णय वा कार्यका सम्बन्धमा सार्वजनिक निकायले प्रतिवेदन दिने, स्पष्टीकरण दिने, उत्तर दिने वा जवाफ दिने कार्यलाई सामान्यता उत्तरदायित्व भनिन्छ। कुनै कार्य गरेको वा नगरेको वा कस्तो अवस्थामा रहेको छ भन्ने बारेमा सरोकारवालाहरुलाई जानकारी दिनु सूचनाको अधिकार हो जसले पारदर्शिता प्रवर्द्धन गरी उत्तरदायित्वमा टेवा पुऱ्याउछ। Accountability शब्द Latin accomptare बाट आएको हो जसको अर्थ Account Giving हुन्छ । यसलाई कहिलेकाही responsibility, answerability, blameworthiness, liability, culpability को रुपमा पनि बुझ्ने गरेको पाइन्छ । कुनै निश्चित कार्यविवरण, दायित्व वा जिम्मेवारीको कारणले गर्दा उत्तरदायित्व सृजना हुन्छ। उत्तरदायित्व विनाको सार्वजनिक जीवन कल्पना पनि गर्न सकिदैन । उत्तरदायित्वलाई सुशासनको प्रमुख खम्बाको रुपमा लिइन्छ । उत्तरदायित्व मूलतः एकै स्थानमा रहन्छ त्यसैले भनिएको छ "Accountability cannot be shared".

सार्वजनिक पदाधिकारीहरु जनताका सेवक वा प्रतिनिधि हुन र उनीहरुको कामकारवाहीको बारेमा आम जनताले थाहा पाउनु पर्छ। शासनको बैधता स्थापना गर्न र आम जनतालाई शासनसँग निकट बनाउन शासनमा उत्तरदायित्व आवश्यक हुन्छ। लोकतान्त्रिक शासन प्रणालीलाई वलियो वनाई न्याय र नैतिकतामा आधारित स्वस्थ समाज निर्माण गर्न उत्तरदायित्वले भरिएको शासन प्रणाली आजको आवश्यकता र पहिलो शर्त हो। आजको विश्वमा घुमाउरो, तहगत, अप्रत्क्षय, प्रक्रियागत भन्दा पनि सोझो, प्रत्यक्ष र नतिजामुखी उत्तरदायित्वको आवश्यकता र महत्वमा जोड दिइएको पाइन्छ । NPM, NPS, Reinventing Government, Responsive Governance, Good Governance, e-governance, Digital era Governance आदिले पनि उत्तरदायित्वको महत्व अझ बृहत र विस्तृत बनाएका छन। विधागत रुपमा उत्तरदायित्वलाई राजनीतिक, व्यवस्थापकीय, कानूनी, सेवाग्राहीप्रतिको, व्यवसायिक, नैतिक, वित्तिय, प्रशासनिक, कार्यक्रममूलक, आदिमा विभाजन गर्न सकिन्छ। उत्तरदायित्वका प्रकारको बिभाजनको सन्दर्भमा विभिन्न विद्धानहरुको एक मत पाइदैन र उत्तरदायित्वको विभाजन गर्ने क्रममा Duight waldo ले निम्न १२ प्रकारमा बाडेका छन्। जुन यस प्रकार छन्: संविधानप्रति, कानूनप्रति, राष्ट्रप्रति, मानवताप्रति, लोकतन्त्रप्रति, संगठनको मुल्य र संस्कृतिप्रति, व्यावसायप्रति, सार्वजनिक हितप्रति, परिवार र साथीप्रति, वर्ग, जाति, र दलप्रति, आफैप्रति, धर्म र ईश्वरप्रति । उत्तरदायित्व मूलतः Upward Oriented हुन्छ। तर आजको समाजमा नागरिक र समाजप्रतिको दायित्वलाई पनि अहम रुपमा स्वीकार गरी पारदर्शिता प्रवर्द्धनमा जोड दिइएको पाइन्छ।

सार्वजनिक निकायमा उत्तरदायित्वको अवस्था :

सार्बजनिक निकायमा हुने गरेका कामकारवाहीकाबारेमा आम नागरिक र समाजले थाहा पाउने गरी कार्य गर्ने प्रणालीको विकास आजका दिनमा पनि पर्याप्त मात्रामा भएको पाइदैन । सूचनाको हक नागरिक समक्ष वस्तुनिष्ठ ढङ्गले कार्यान्वयन गर्न सार्वजनिक निकायहरु धेरै हदसम्म असफल भएका छन्। सार्वजनिक सरोकारका बिषयमा वा आफूसँग सम्वन्धित विषयका वारेमा आवश्यक सूचना तथा जानकारीहरुमा आम नागरिकको सरल र सहज पँहुचलाई सूचनाको हक भनिन्छ । बर्तमान संविधानको धारा २७ ले पनि सूचनाको हकलाई संवैधानिक हकको रुपमा व्यवस्था गरेको भएता पनि आजका दिनमा पनि नागरिकलाई सार्वजनिक सूचना प्राप्त गर्न कठिनाइ र हैरानी छ। राज्यले गोप्य राख्नु पर्ने भनी कानूनी रुपमा किटान गरिएका सूचनाहरुको संरक्षणको जिम्मा पनि सार्वजनिक निकायको उत्तरदायित्व भित्र पर्दछ। सूचनाको हक सम्वन्धी ऐन, २०६४ ले नेपालको सार्वभौमसत्ता, अखण्डता, राष्ट्रिय सुरक्षा, सार्वजनिक शान्ति सुव्यवस्था वा अन्तर्राष्ट्रिय सम्वन्धमा गम्भीर खलल पार्ने, अपराधको अनुसन्धान, तहकिकात, तथा अभियोजनमा प्रत्यक्ष असर पार्ने, आर्थिक, व्यापारिक तथा मौद्रिक हित वा बौद्धिक सम्पत्तिको संरक्षण वा बैकिङ्ग वा व्यापारिक गोपनियतामा गम्भीर आघात पार्ने, विभिन्न जातजाति वा सम्प्रदायबीचको सुसम्वन्धमा प्रत्यक्ष रुपमा खलल पार्ने र व्यक्तिगत गोपनीयता, व्यक्तिको जीउ, ज्यान, सम्पत्ति, स्वास्थ्य, वा सुरक्षामा खतरा पुऱ्याउने प्रकृतिको सूचना प्रवाह नगरिने कोटीमा पर्ने कुरा उल्लेख गरेको भएता पनि यदाकदा राज्य र नागरिकको हितमा प्रतिकूल पर्ने प्रकृतिका संवेदनशील सूचनाहरु प्रकाशन र प्रसारण हुने गरेको पाइन्छ। यस्ता संवेदनशील विषयमा सार्वजनिक निकायहरु सचेत हुनु आवश्यक देखिन्छ।

पूर्वसावाधानीको सिद्धान्त, अधिकार कर्तव्य र उत्तरदायित्वका सामञ्जस्यताको सिद्धान्त, पूर्वसावधानीसम्वन्धी प्रश्नको जवाफको

सिद्धान्त, जिम्मेवार व्यक्तिको उत्तरदायित्वको सिद्धान्त, जवाफ वैधताको सिद्धान्त, संस्थागतरुपमा जवाफ दिनु पर्ने सिद्धान्त, सुविधा कटौतीको सिद्धान्त, कामको सार्वजनिकीकरणको सिद्धान्त, आत्म सूचनाको कर्तव्यको सिद्धान्त, अभिप्राय सार्वजनिकको सिद्धान्त, दिशा निर्देशन वा प्रमुख पदाधिकारीको उत्तरदायित्वको सिद्धान्त र पूर्ण उत्तरदायित्वको सिद्धान्त आदि सार्वजनिक/प्रशासनिक उत्तरदायित्वका सिद्धान्तहरु हुन् जसले सार्वजनिक पदाधिकारीहरुलाई आफ्नो काम र कर्तव्यप्रति ईमानदार र जिम्मेवार हुन् अभिप्रेरित गरेका छन् । उत्तरदायित्व भित्र Responsibility, Answerability, Responsiveness समेत पर्दछन् । सार्वजनिक उत्तरदायित्व सरकार र कर्मचारीहरुको गुणस्तर मापन गरी नियन्त्रण गर्ने संयन्त्र हो । यसले सार्वजनिक सेवामा प्रभावकारिता वृद्धि गरी गुणस्तरमा सुनिश्चितता प्रदान गर्दछ । जवाफदेही पारदर्शी सरकारको पहिलो शर्त नै उत्तरदायित्वको पुर्णरुपमा परिपालना नै हो । तर आज पनि नेपाली समाजमा सूचना लुकाउने, भनेको समयमा नपाउने, पाइहाले पनि अपुर्ण सूचना प्राप्त गर्ने जस्ता समस्या विद्यमान छन् ।

सार्वजनिक निकायमा उत्तरदायित्वको आवश्यकता र महत्व:

- ✓ खुल्ला, पारदर्शी र जवाफदेही समाजको निर्माण गर्न,
- ✓ न्याय र नैतिकतामा आधारित स्वस्थ्य समाज निर्माण गर्न,
- ✓ सुशासनलाई सुदृढीकरण गर्न,
- ✓ सार्वजनिक निर्णयहरुलाई नागरिक समक्ष पुऱ्याउन,
- ✓ लोकतान्त्रिक मूल्य र मान्यताको प्रवर्द्धन गर्न,
- ✓ प्रशासनिक निर्णयहरुमा वैधता प्राप्त गर्न,
- ✓ सार्वजनिक प्रशासन प्रति जनताको विश्वासमा अभिवृद्धि गर्न,
- ✓ सार्वजनिक सेवा प्रवाहलाई छिटो, छरितो, पारदर्शी र गुणस्तरीय बनाउन,
- ✓ कार्य सम्पादनको स्तर र दक्षतामा वृद्धि गर्न,
- ✓ अनुगमन र मुल्यांकन प्रणालीलाई वस्तुनिष्ठ बनाउन,
- ✓ सार्वजनिक स्रोत र साधनको दुरु प्रयोग रोकी यसको दक्ष, प्रभावकारी, मितव्ययी, समन्यायिक प्रयोग गर्न,
- ✓ भ्रष्टाचार रोकी दिगो, फराकिलो र समावेशी आर्थिक विकास र आर्थिक वृद्धि गर्न,
- ✓ असल शासकीय संस्कृतिको निर्माण गर्न,
- ✓ कानूनको शासनलाई व्यावहारिक रुपमा कार्यान्वयन गर्न,

नेपालको सन्दर्भमा सार्वजनिक निकायमा भएका कानूनी व्यवस्था:

प्रधानमन्त्री तथा अन्य मन्त्रीहरु संघीय व्यवस्थापिका र मुख्य मन्त्री तथा अन्य मन्त्रीहरु प्रादेशिक संसद प्रति सामूहिक रुपमा र मन्त्रीहरु आफ्ना मन्त्रालयका कामका लागि व्यक्तिगत रुपमा क्रमशः प्रधानमन्त्री र मुख्य मन्त्री प्रति उत्तरदायी हुने व्यवस्था वर्तमान संविधानले गरेको छ । सरकारले गरेका काम कारवाहीहरुको अनुगमन र मुल्यांकन गर्न संसदीय समितिको व्यवस्था गरिएको छ । संवैधानिक निकायहरुले बार्षिक रुपमा प्रतिवेदन पेस गर्नु पर्ने व्यवस्थाले पनि उत्तरदायित्व प्रवर्द्धनमा टेवा पुगेको छ । सुशासन ऐन, २०६४ ले सार्वजनिक प्रशासनलाई जनमुखी, जवाफदेही, पारदर्शी, समावेशी एवं सहभागितामुलक बनाउने कुरामा जोड दिइएको छ । सूचनाको हक सम्बन्धी ऐन, २०६४ ले सार्वजनिक सरोकारको विषयमा सूचना दिनु पर्ने, सार्वजनिक कामकारवाहीमा पारदर्शीता कायम गर्नु पर्ने विषयमा जोड दिइएको छ । निजामती सेवा ऐन, २०४९, स्थानीय स्वायत्त शासन ऐन, २०५५ र नियमावली, २०५६ लेखा परीक्षण ऐन, २०४८, सार्वजनिक खरिद ऐन, २०६३ र नियमावली, २०६४ आदिले पनि उत्तरदायित्व प्रवर्द्धनमा सहयोग गरेका छन् ।

सुशासन विस्तृत कार्ययोजना, २०६८, सेवा केन्द्र सम्बन्धी निर्देशिका, २०६५, सरकारी निर्णय प्रक्रिया सरलीकरण निर्देशिका, २०६५, हेलो सरकार संचालन निर्देशिका, २०६८, जन गुनासो व्यवस्थापन निर्देशिका, २०६६, आदि पनि उत्तरदायित्व अभिवृद्धि गर्नमा केहि हदसम्म उपयोगी सिद्ध भएका छन् । सार्वजनिक सुनुवाइ, नागरिक बडापत्र, प्रवक्ता र सूचना अधिकारीको व्यवस्था, सरकारका मन्त्री र सचिवहरु संसदीय समितिहरु प्रति उत्तरदायि भई जवाफ दिनु पर्ने व्यवस्था, प्रगति प्रतिवेदन पेश गर्नु पर्ने व्यवस्था, कार्य सम्पादन करार सम्बन्धी व्यवस्था, हरेक सार्वजनिक पदाधिकारीले पदले सृजना गरे अनुरुपको जिम्मेवारी र उत्तरदायित्व निर्वाह गर्नु पर्ने व्यवस्था आदिले पनि सार्वजनिक प्रशासनलाई उत्तरदायी र जवाफदेही बनाउन महत्वपुर्ण भूमिका रहेको छ ।

उत्तरदायित्व सम्बन्धमा सार्वजनिक प्रशासनमा देखिएका समस्याहरु:

- ✓ प्रशासनिक प्रतिबद्धता र इमानदारिताको अभाव,
- ✓ सामाजिकीकरणमा Ethics and Morality पक्ष कमजोर हुँदै जानु,
- ✓ नागरिक शिक्षा र नागरिक चेतनाको स्तर अपेक्षाकृतरुपमा विकास हुन नसक्नु,
- ✓ नागरिक समाज दलीय विभाजनका कारण क्षयिकरण हुदै जानु,
- ✓ उत्तरदायित्व निर्वाह अरुको मात्र दायित्व हो भन्ने कमजोर मानसिकता,
- ✓ राजनीतिक अस्थिरता र सरकारी कामकारवाहीमा पारदर्शीताको अभाव,
- ✓ बस्तुनिष्ठ कार्यसम्पादन मूल्यांकन हुन नसक्नु,
- ✓ कर्मचारीलाई दिनुपर्ने न्यूनतम र अत्यावश्यक सुविधा उपलब्ध गराउन नसक्नु,
- ✓ दण्ड र पुरस्कारको नीतिलाई व्यवहारमा अवलम्वन गर्न नसक्नु,
- ✓ प्रशासनयन्त्र जनमुखी, पारदर्शी, निष्पक्ष, तटस्थ हुन नसक्नु,
- ✓ सार्वजनिक निकायहरु बीच पर्याप्त समन्वय हुन नसक्नु,
- ✓ जनसहभागिता र नागरिक समाजको यथेष्ठ परिचालन हुन नसक्नु,
- ✓ सूचनाको हकको व्यावहारिक रुपमा कार्यान्वयन गर्न नसक्नु,
- ✓ राजनीति र प्रशासनबीचको कार्य क्षेत्रको सीमांकन हुन नसक्नु,
- ✓ प्रभावकारी अनुगमन, मूल्यांकन तथा सुपरिवेक्षणको अभाव कायम रहनु,

- ✓ विगतबाट पाठ सिक्ने बानीको विकास हुन नसक्नु,
- ✓ कर्मचारीतन्त्रमा व्यावसायिकताको अभाव हुनु,

उत्तरदायित्व बढाउन विकास भएका नवीनतम् विधिहरु:

- ✓ Digital era governance
- ✓ Citizen-Centric Administration
- ✓ Public Hearing
- ✓ Social Audit
- ✓ Virtual Organization
- ✓ People Bonus
- ✓ Team work/Group work
- ✓ One Door System
- ✓ Mobile Government
- ✓ Community Led Government
- ✓ One stop service, Citizen charter
- ✓ Hello Sarkar
- ✓ Flat structure and Functional Autonomy
- ✓ Lean and thin organization structure
- ✓ Mobile service, Desk system
- ✓ Networking/ Cross broader Organization
- ✓ Technical Audit
- ✓ Performance Evaluation
- ✓ Performance based pay system
- ✓ White paper, Citizen advisory board
- ✓ Management audit, Ombudsman
- ✓ Grievance Handling,
- ✓ 360o evaluation system
- ✓ NPM, NPS, Etc.

सार्वजनिक निकायमा उत्तरदायित्वलाई प्रभाकारी बनाउने उपायहरु :

- ✓ राजनीतिक कटिबद्धता र प्रशासनिक प्रतिवद्धता हुनु पर्ने,
- ✓ प्रभावकारी सन्तुलन र नियन्त्रणको व्यवस्था गर्ने,
- ✓ सामाजिकीकरण प्रक्रियामा Ethics and Morality पाटोलाई बलियो बनाउने,
- ✓ निर्णय प्रक्रियालाई पारदर्शी र बस्तुनिष्ठ बनाउने,
- ✓ अनुगमन र मूल्यांकन प्रणालीलाई व्यवाहारिक तथ्य र तथ्याङ्कमा आधारित बनाउने,
- ✓ Whistle blower's Protection Act लाई कार्यान्वयन गर्ने,
- ✓ नागरिक चेतना र नागरिक शिक्षामा जोड दिने,
- ✓ कार्य सम्पादनमा आधारित मूल्यांकन प्रणाली लागु गर्ने,
- ✓ सार्वजनिक प्रशासनलाई राजनीतिक प्रभावबाट टाढा राख्ने,
- ✓ सार्वजनिक प्रशासनसँग आवद्ध कर्मचारीहरुलाई Performance Contract गराउने र उनीहरुले दिइएको Outcomes का आधारमा वृत्ति विकासका अवसरहरु सिर्जना गर्ने,
- ✓ अनुसन्धानमा आधारित खोजमूलक पत्रकारिताको विकास गर्ने,
- ✓ नागरिक समाजको सशक्तिकरण गरी दलिय आवद्धतामा कमि ल्याउने,
- ✓ सूचनाको हकको प्रचारप्रसार गरी व्यवहारिक कार्यान्वयनमा जोड दिने,
- ✓ स्पष्ट परिभाषित जिम्मेवारी दिने सोही अनुरुप कार्य संपादन मूल्यांकन गर्ने परिपाटिको विकास गर्ने,
- ✓ उत्तरदायित्वलाई कार्य सम्पादनसँग आबद्ध गर्ने,
- ✓ निर्णय, अनुगमन र मूल्यांकनमा सेवाग्राहीको संलग्नतामा जोड दिने,
- ✓ व्यवसायिक उत्तरदायित्वलाई संस्थागत गर्ने प्रणालीको विकास गर्ने,
- ✓ प्रशासनिक जटिल कार्यविधि र परम्परागत संगठनलाई समय सापेक्ष सुधार गर्ने,
- ✓ सामाजिक मूल्य मान्यता र पेशागत आचारसंहिताको प्रभावकारी कार्यान्वयन र अनुगमन गर्ने,
- ✓ सार्वजनिक सुनुवाईमा प्रभावकारिता ल्याउने, आदि ।

निष्कर्षमा,

न्याय र नैतिकतामा आधारित स्वास्थ्य समाज निर्माण गरी देशमा सार्थक र परिणाममुखी विकास गर्न उत्तरदायित्वलाई संस्थागत गर्न अपरिहार्य भई सकेको छ । लोकतन्त्रमा सरकारले गरेका कामकारवाहीलाई वैधता प्राप्तिका लागि जवाफदेही, पारदर्शी, र सहभागितामूलक शासन प्रणालीमा जोड दिने गरिन्छ। राज्यका सबै सार्वजनिक निकायहरुले गरेका कार्यहरुको बारेमा आम नागरिकलाई सहज रुपमा सूचना प्रेषित गर्न सकेको खण्डमा भ्रष्टाचार जस्ता विकृतिहरुलाई धेरै हदसम्म हटाउन सकिन्छ। नेपालको सार्वजनिक निकायमा उत्तरदायित्वको अवस्था कमजोर रहेको छ। यसको प्रमुख कारण बिभिन्न राजनीतिक परिवर्तन भएता पनि सार्वजनिक निकाय र कर्मचारीको संस्कार, संस्कृति र सोचमा परिवर्तन हुन नसक्नु नै हो । राजनीतिक र प्रशासनिक क्षेत्रको शुद्धीकरण गरी सूचनाको हकलाई व्यवहारिक रुपमा कार्यान्वयन गर्ने हो भने सार्वजनिक निकायमा उत्तरदायित्वलाई सबल बनाउन सकिने देखिन्छ।

सन्दर्भ सामाग्रीहरु :

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- राजन खनाल, सार्वजनिक व्यवस्थापनका सामयिक बहस, दोस्रो परिमार्जित संस्करण, सोपान मासिक, डिल्ली बजार, काठमाण्डौं ।
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गोमा बञ्जाडे
अधिकृत, ने.ना.उ.प्रा.

टौदह: एक पर्यटकीय स्थल

कीर्तिपुर नगरपालिकाको वडा नं.६ स्थित, प्राचीनकालदेखि नै कर्कोटक नागराजा र नागरानीको बासस्थानको रूपमा चिनिने ८३ रोपनी जलक्षेत्र दह र सो दह वरिपरिको बस्ती नै टौदह हो । अष्टभुजाकारमा फैलिएको यस दहको अधिकतम लम्बाई ५०० मि., अधिकतम चौडाइ ४०० मि. र अधिकतम गहिराई २० मि. रहेको मानिन्छ। यो दह समुद्र सतहबाट १२९९ अर्थात् करिब १३०० मिटरको उचाइमा पर्छ भने यो दह ८५ डिग्री १७ मिनेट ६ सेकेन्ड पूर्वी देशान्तर र २७ डिग्री ३८ मिनेट ५४ सेकेन्ड उत्तरी अक्षांशमा पर्दछ।

चम्पादेवी, भष्मासुर र सोलीथुम्के डाँडाको काखमा रहेको शान्त र सौम्य टौदह वास्तवमै प्रकृतिको अनुपम उपहार हो। यस क्षेत्रमा करीब १०० भन्दा बढी प्रकारका चराचुरूङ्गीहरू, ३८ जातका बोटबिरूवा, ३६ जातका किराहरू पाइने भएकोले जैविक अनुसन्धानका लागि पनि महत्वपूर्ण मानिन्छ। टौदहमा कमन कार्प, सिल्भर कार्प, ग्रास कार्प, गोल्डेन कार्प, जुङ्गे माछा आदि विविध खालका माछाहरूले पोखरीको सौन्दर्य बढाएका छन्।

टौदह कर्कोटक नागराजा र नागरानीको बासस्थान भएकोले यहाँ प्रत्येक वर्षको नागपञ्चमीको दिन नागको पूजा गर्नेको घुँइचो हुन्छ । त्यस दिन टौदहमा घोगा सहितको मकैको बोट चढाउने, कपासको नाग बनाएर पूजा गर्ने, चामलको दुध बनाएर नागलाई चढाउने आदि गरी नागलाई खुसी पार्ने चलन छ। यहाँका नागलाई पूजाआजा गरी खुसी पार्न सकेमा धन दौलत बढ्ने, निरोगी हुने र उत्तरोत्तर प्रगति हुँदै जाने जनविश्वास छ। माछालाई आहार हाल्दै रमाउँदै गर्दा दिन बितेको पत्तै नहुने रमणीय टौदहमा नागपञ्चमी बाहेक शनिबारको दिन तथा अन्य सार्वजनिक बिदाको दिनमा पनि प्रकृतिप्रेमी व्यक्तित्वहरूको ओइरो नै लाग्छ । खास गरी बिदाको दिनमा प्राकृतिक सुन्दरतासँगै रमाउन चाहने जोडीहरू र भ्रमणबाट ज्ञान आर्जन गर्न चाहने विद्यार्थीजनहरूका लागि टौदह एउटा अद्वितीय ठाउँ हो ।

केही वर्ष अगाडिसम्म छेउछाउमा अतिक्रमित हुँदै अस्त-व्यस्त रूपमा रहेको यस टौदह परिसरलाई यहींका स्थानीय जनताको सक्रियता र सहभागितामा कर्कोटक नागराजा-नागरानी बासस्थान टौदह समाजको गठन गरी सोही समाजको नेतृत्वमा यथोचित संरक्षण गरी यस दहलाई परिक्रमा गर्न सहज र रमणीय बनाउन वरिपरि चौडा बाटो बनाई, ठाउँ ठाउँमा फूलहरू अनि दुबो लगाई, हिंड्दै जाँदा थाकेमा बस्नलायक स्थानहरू बनाई, फलाम र स्टीलका आकर्षक बार बनाएर बच्चाहरू घुमाउन पनि सुरक्षित र सहज बनाइएको छ।

कसरी पुग्ने?

काठमाडौँ रिङरोडको बल्खुबाट चोभार गेट, चोभार डाँडा र पहिलाको हिमाल सिमेन्ट कारखाना भएको ठाउँ हुँदै दक्षिणकालीतिर जाने सडकमा बल्खुबाट ४.२ किलोमिटरको दुरीमा सडकको देब्रेपट्टि छेवैमा देखिने दह नै टौदह हो। सार्वजनिक सवारी साधनमा चढेर जाँदा त टौदह भन्ने ठाउँमा झर्दा बित्तिकै दहको गेटमा पुगिन्छ । काठमाडौँको रत्नपार्क नजिकैको पुरानो बसपार्कबाट त्रिपुरेश्वर, कालीमाटी, कुलेश्वर, बल्खु हुँदै र पाटनको लगनखेलबाट सातदोबाटो, नक्खु दोबाटो, धोबीघाट, बल्खु हुँदै चोभार गेट, चोभार डाँडा र टौदह भएर दक्षिणकालीसम्म जाने रुट नं. २२ को सार्वजनिक बसद्वारा पुग्न सकिन्छ।

टौदहसम्बन्धी केही रोचक किंवदन्तीहरू:

टौदहको निर्माण

चाहे श्रीकृष्ण भगवान्ले होस्, चाहे चिनियाँ बोधीसत्व महामञ्जुश्रीले होस्स चोभारको डाँडा काटी कालीदहको पानी बाहिर पठाएपछि काठमाडौँ उपत्यका मानव बस्ती बस्न योग्य भएको कुरा सर्वविदितै छ । तात्कालिक कालीदह कर्कोटक नागराजा र नागरानी सहित बासुकी, तक्षक आदि थुप्रै नागहरू र अन्य जलचरहरूको बसोबास थियो । प्राचीन कालका नागहरू आधा मानव र आधा सर्पको रूपधारी दैवी शक्ति सम्पन्न प्राणीका रूपमा थिए।

कालीदहको पानी चोभारको डाँडा काटी बाहिर फाल्दा यस्ता दैवी शक्ति सम्पन्न नागहरू सहित सम्पूर्ण जलचरहरू पनि पानीसँगै बगेर तलतिर गएको देखेर यस्ता नागहरू नेपालबाट बाहिरिएमा केही अनिष्ट हुने देखी चोभारको गल्छीदेखि करिब २ किलोमिटर दक्षिणतिर एउटा सानो दह निर्माण गरी सोही दहमा कर्कोटक नागराजा र नागरानी सहित अन्य जलचरहरू राखिएको किंवदन्ती छ। सोही दहलाई अहिले टौदह वा टौदह पोखरी भनेर चिनिन्छ।

टौदह पोखरी निर्माण गर्न वा खन्नको लागि पाण्डुपुत्र भीमसेनलाई लगाइएको थियो रे। भीमसेनले ३ कोदाली माटो निकाली ३ अन्जुली पानी ल्याएर राखी टौदहको निर्माण गरेका भन्ने किंवदन्ती पनि सुन्न पाइन्छ । फेरि कसैका अनुसार मन्जुश्रीले खड्गले माटो निकाली टौदहको निर्माण गरेका हुन् । त्यसकारण यस दहलाई 'खड्ग दह' भनेर पनि चिनिन्छ। कसै-कसैको भनाइ अनुसार कालीदहको पानी

सबै बाहिर गएपछि जलविना त्यहाँ बस्न नसक्ने देखी कर्कोटक नागराजा आफैले आफ्नो बस्ने ठाउँको बन्दोबस्त मिलाइदिन माग गरेको र सोही अनुसार टौदह पोखरीको निर्माण गरी कर्कोटक नागराजा र नागरानी सहित अन्य जलचरहरूलाई राखिएको भन्ने पनि सुन्न पाइन्छ ।

टौदहको निर्माण कसरी भयो भन्ने सम्बन्धमा अर्को एउटा छुट्टै प्राचीन किंवदन्ती पनि सुनिन्छ । यस किंवदन्ती अनुसार परापूर्व कालमा अहिले टौदह भएको ठाउँमा ४०।५० घर भएको एउटा बस्ती थियो । एकदिन मध्यान्नमा एउटा मोटोघाटो हृष्टपुष्ट र सामान्य मानिसभन्दा अग्लो जोगी आई अलख जगाउँदै भिक्षा माग्न लागेछ । जोगीको खाइलाग्दो र बलियो बाङ्गो शरीर देखेर उसलाई कसैले पनि भिक्षा दिएनछन् । अन्तिममा एउटा कुटीमा भिक्षा माग्न पुगेछ । उक्त कुटीकी बुढीमान्छेले ँम त यही गाउँमा अरूको ढिकीजाँतो गरेर खाने मान्छे हुँ, तैपनि मेरो घरमा भिक्षा माग्न आउनुभयो, कनिका ल्याउँछु भनी भित्र गएर कनिका ल्याउँदा त जोगी अलप भइसकेका रहेछन् । भोलिपल्ट बिहान बुढीमान्छेको कुटी बाहेक सम्पूर्ण बस्ती तालमा परिणत भएछ । ती बुढीमान्छेको कुटी अहिले तालको बिचमा रहेको केही उठेको र रूखहरू भएको थुम्को वा ढिस्कोमा थियो रे ।

टौदहका नागराजाले उपहार दिएको भोटो (मछिन्द्रनाथको भोटो)

मच्छिन्द्रनाथको भोटो वा सो भोटो देखाउने जात्रासँग टौदहका नागराजाको नजिकको सम्बन्ध छ भनिन्छ । यो भोटो देखाउने जात्रा बुङमतीका मच्छिन्द्रनाथको रथ तान्ने जात्राको अन्तिम दिनमा पर्दछ । यस जात्राको तिथिमिति ज्योतिषीहरूले हेराएर निकाल्ने भएकाले यही दिन पर्छ भन्न सकिँदैन तर सामान्यतया यो जात्रा प्रत्येक वर्षको जेठ, असार वा साउन महिनामा पनि पर्न सक्छ । प्रत्येक वर्ष जावलाखेलमा सर्वसाधारणलाई देखाइने सो भोटो विभिन्न बहुमूल्य रत्न जडित कालो रङको छ । यो भोटो टौदहका नागराजाले एकजना किसानलाई दिएको उपहार हो भनिन्छ । अब त्यो भोटो नागराजाले कुन किसानलाई किन दिए र त्यो मच्छिन्द्रनाथकहाँ कसरी पुग्यो र किन प्रत्येक वर्ष सर्वसाधारणलाई देखाइन्छ भन्ने सम्बन्धमा एउटा कहानी यस प्रकार छः

उहिल्यै टौदहको नजिकै ग्वाल नाम गरेका एकजना नेवार किसान वा ज्यापु फुकफाक गर्न पनि सिपालु थिए रे । उनको खेत टौदहको डिलसँगै जोडिएकोले नागराजासँग उनको राम्रो चिनजान थियो भनिन्छ । एकदिन नागरानीको टाउको असाध्यै दुखेर (कसैकसैको भनाइअनुसार आँखा दुखेर) छट्पटाइरहेका बेला ती किसानले फुकेर उनलाई सन्चो पारिदिएकाले नागराजाले उनलाई एउटा बहुमूल्य रत्न जडित भोटो उपहार स्वरूप टक्रयाएछन् । ती किसान नागराजादेखि अत्यन्त खुसी भई आफ्नो बाटो लागेछन् । केही समयपछि ती किसान त्यही भोटो लाएर टौदह नजिकैको खेतमा काम गर्दै गर्दा उनलाई दिसा लागेछ । नागराजाले त्यो भोटो दिँदा दिसा गर्ने बेलामा नलगाउन भनेका थिए रे । त्यसैले त्यो भोटो खोलेर खेतको डिलमा राखी दिसा गर्न झाडीतिर पसेछन् । दिसा गरी फर्केपछि यसो डिलतिर हेर्छन् त अघि राखेको भोटो छैन । यताउता हेर्दा कहीँ नदेखेपछि निरास भई घरतिर लागेछन् ।

त्यसको केही दिनपछि पाटनमा मच्छिन्द्रनाथको रथ तान्ने जात्रामा टौदहका ग्वाल किसान पुग्दा आफूलाई नागराजाले उपहार दिएको भोटो एकजना भक्तपुरे किसानले लगाइरहेको देखेछन् । भक्तपुरे किसानका अनुसार त्यो भोटो उनले भक्तपुरको सिद्धपोखरीको डिलमा फेला पारी लिएका रहेछन् । वास्तविक कुरा के परेछ त भन्दा त्यो भोटो ग्वाल किसानले राखेको ठाउँबाट भूतले चोरेर लगी भक्तपुरको सिद्धपोखरीको डिलमा राखेर पोखरीभित्र पसेका बेला भक्तपुरका ती किसानले फेला पारी लगाएका रहेछन् । त्यो भोटो देखेपछि टौदहका किसानले मेरो हो भनी दाबी गर्दा ती दुईजनाको झगडा परेछ । जात्रामा जम्मा भएका मान्छेहरूका अगाडि ती दुई किसानहरूमध्ये कुनैले पनि भोटो आफ्नो हो भन्ने यथेष्ट प्रमाण दिन नसकेपछि जबसम्म त्यो भोटो आफ्नो हो भन्ने यथेष्ट प्रमाणका साथ कोही मान्छे आउँदैन, तबसम्म यो भोटो मच्छिन्द्रनाथ देवतासँग रहन्छ भन्ने निर्णय गरिएकोले त्यही बेलादेखि प्रत्येक वर्ष मच्छिन्द्रनाथको जात्राको अन्तिम दिन यो भोटो कसको हो भनी सर्वसाधारणको जमातमा देखाइने गरेको किंवदन्ती छ ।

त्यो भोटो देखाउने जात्राको दिनमा हावाको भुमरीको रूपमा टौदहका नागराजा पनि पाटनको जावलाखेल गई भोटोको दर्शन गरेर आउँछन् , यसको चासो लिए अहिले पनि हेर्न सकिन्छ, मच्छिन्द्रनाथको भोटो देखाउने जात्राको एकदिन अघि ठाडै भएका टौदह पोखरी नजिकका मकैका बोटहरू भोलिपल्ट सर्लक्क ढल्ने गरेको भनाइ राख्छन् स्थानीय बुढापाकाहरू ।

टौदहको गहिराइ

टौदहको नजिकै पश्चिमपट्टि चम्पादेवी डाँडाको काखैमा एउटा सोल्थुम्के वा सोले थुम्को भन्ने थुम्को वा डाँडो छ । त्यसलाई एक पाखे डाँडो पनि भनिन्छ । त्यस थुम्कामा अहिले पानी ट्याङ्की पनि बनाइएको छ । किंवदन्ती अनुसार सुरुमा टौदहको गहिराइ त्यही सोल्थुम्के डाँडाको उचाइ बराबर नै थियो रे । किंवदन्ती अनुसार हालको काठमाडौँ उपत्यकामा अवस्थित तत्कालीन कालीदहको पानी चोभारको डाँडा काटी गल्छी बनाई त्यहाँबाट बाहिर पठाएपछि कालीदहमा बसोबास गर्दै आएका कर्कोटक नागराजा र नागरानी सहित अन्य जलचरहरूको बसोबासको लागि टौदहको निर्माण गर्न पाण्डुपुत्र भीमसेनलाई लगाइको थियो रे । भीमसेनले अहिलेको टौदह भएको ठाउँबाट एक कोदाली माटो निकालेर पश्चिमपट्टि फाल्दा त्यो सोल्थुम्के भन्ने डाँडा बनेको हो रे । यो कुरा साँच्चै हो वा संयोगवश यस्तो भएको हो अहिले पनि त्यो थुम्को वा डाँडाको आधार भाग वा तलको भागको आकार र टौदहको माथिल्लो सतहको आकार मिल्दोजुल्दो देखिन्छ । कोदालीले माटो फाल्दा माथिको भाग तल र तलको भाग माथि परेकोले त्यस्तो भएको भन्ने जनविश्वास छ ।

अर्को एउटा किंवदन्ती अनुसार भीमसेनले ३ कोदाली माटो निकाली ३ अञ्जुल पानी ल्याएर खन्याई टौदह निर्माण गरेका हुन् भनिन्छ । कालान्तरमा टौदहका नागहरू पुनः काठमाडौ उपत्यका

फर्की चोभारको गल्छी थुनेर बस्न थाले पछि टौदहलाई पुर्ने उद्देश्यले भीमसेनले टौदहकै आयतन बराबरको पहाड बोकेर ल्याउँदै गर्दा चम्पादेवीको डाँडो काट्दा बित्तिकै कुखुरा बासेको सुनेर वा उज्यालो भएको थाहा पाएर सबैले देख्ने गरी टौदह पुरेमा केही अनिष्ट हुनसक्ने देखी उक्त पहाडलाई त्यहीं मिल्काई अन्तरध्यान भए रे । त्यही भीमसेनले फालेको माटोको डल्लोबाट अहिलेको सोल्थुम्के भन्ने डाँडो बनेको जनविश्वास पनि छ । यस किंवदन्ती अनुसार पनि सुरुमा टौदहको गहिराइ त्यही थुम्काको उचाइसँग मिल्दोजुल्दो हुनुपर्छ भन्ने बुझिन्छ । अहिले भने विभिन्न कारणले पुरिँदै जाँदा टौदहको गहिराइ कम भएको हुन सक्छ ।

टौदहका नागराजाको दैवी शक्ति:

परापूर्वकालदेखि अहिलेसम्म पनि टौदह पोखरीमा पौडी खेल्ने, डुङ्गा चलाउने, माछा मार्ने तथा सिकार खेल्ने जस्ता क्रियाकलापहरू गर्न सख्त मनाही छ । कसैले यसो गरेमा वा पोखरी छेउछाउको माटो, ढुङ्गा तथा अन्य वस्तुहरू कोही व्यक्तिले प्रयोग गरेमा वा पोखरीमा फोहर मैला गरेमा सो व्यक्तिलाई नागले धेरै दुःख दिई कहिल्यै प्रगतिपथमा लम्कन नसक्ने जनविश्वास पनि यथावतै छ । अब यसको प्राचीन कारण के हुन सक्छ त भन्ने बारेमा सोधीखोजी गर्दा विभिन्न तथ्य घटनाहरूको उदाहरण दिएर टौदहको सम्पदाको प्रयोग गरी फाइदा उठाउन खोज्नेको मात्र होइन, त्यस्तो कुरा सोच्नेको पनि बिचल्ली हुने गरेको बताउँछन् टौदहबासी बुढापाकाहरू । टौदहका कर्कोटक नागराजामा अहिलेसम्म पनि दैवी शक्ति यथावत् छ भन्ने कुरा जनाउने वा प्रमाणित गर्न हालसालै घटेका थुप्रै तथ्य घटनाहरू सुन्न पाइन्छ ।

टौदह नजिकैका लक्ष्मण के.सी.को घरमा केही वर्ष अगाडि एउटा घटना घट्यो रे भनेको सुन्न पाइयो । आफूले पनि अरूले भनेर सुनेको बताउने एकजना व्यक्तिका अनुसार त्यस घरका मान्छेले टौदहको किनारका वा यसको वरिपरिका ढुङ्गाहरू घरको आँगनमा लगी थुपारेपछि उक्त ढुङ्गाको थुप्राको वरिपरि सयौं नागहरू आई सल्बलाएर त्यहाँ कामै गर्न दिएनन् । पछि ती ढुङ्गाहरू जहाँबाट ल्याएको हो, त्यही ठाउँमा लगी फालेर टौदहका नागराजासँग माफ मागेपछि नागहरू आउन छाडे रे ।

लक्ष्मण के.सी. का छोरा अमृत के.सी. का अनुसार त्यस्तै २०४६/४७ सालतिर नयाँ घर बनाउनको लागि रोडा बनाउने उद्देश्यले टौदह वरिपरिका अर्थात् किनारका ढुङ्गाहरू उहाँ र उहाँकी श्रीमतीले लगेर आँगनमा राख्नासाथ ८-१० वटा सर्पहरू आई त्यस ढुङ्गाको थुप्राको वरिपरि सल्बलाई काम गर्ने मेलोमेसो नै दिएनन् रे । त्यसपछि ती ढुङ्गाहरू लगेर टौदहमा नै फालिदिएपछि सर्पहरू आउन छोडे रे । त्यस्तै कीर्तिपुर नगरपालिका वडा नं. ६ अन्तर्गत पाण्डेछाप निवासी रामरत्न के.सी. को घरमा पनि केही अगाडि एउटा त्यस्तै खालको घटना घटेको थियो भन्ने सुनियो । अन्य व्यक्तिहरूबाट सुने अनुसार पाण्डेछापका एकजना व्यक्तिले टौदहमा नुहाउन आउँदा एउटा ढुङ्गाको मन्दिर फेला पारी घरमा लगेर राखेका मात्र के थिए उनका घर वरिपरि सयौं सर्पहरूले घेरी बस्न खान दिएनन् रे । पछि गएर उक्त ढुङ्गाको मन्दिरलाई टौदहमा नै ल्याई फालेर नागराजाको पूजाआजा गरी माफ मागेपछि मात्र सर्पहरूले छोडेर गए रे । उक्त घटनामा संलग्न व्यक्ति रामरात्न के.सी. र उहाँकी श्रीमती निर्मला के.सी. का अनुसार यो घटना पनि त्यस्तै २०४५ सालतिरकै हो । रामरात्न के.सी. आफै टौदहमा नुहाउन आउँदा एउटा ५ वटा टाउका भएको नागको आकृति भएको ढुङ्गाको मूर्तिजस्तो फेला पारेको साँचो हो रे । टौदहबाट त्यो मूर्ति लिएर घर जाने बेलामा केही परसम्म त एउटा सर्पले पछ्याएको पनि थियो रे । तर त्यसको वास्ता नगरी त्यो मूर्ति घरमा लगेर राखेको दिनदेखि टौदह वरपर पानी परेको थिएन रे । उहाँहरूको भनाइ अनुसार करिब २ महिनासम्म पनि पानी नपरेपछि उहाँले त्यो मूर्ति ल्याएको देख्ने टौदह वरिपरिका केही व्यक्तिहरू आएर त्यो मूर्ति टौदह पोखरीमा नै लगेर फालिदिन अनुरोध गरेपछि रामरात्न के.सी. त्यो मूर्ति लिएर टौदहतिर जाँदै गर्दा त्यहाँ नपुग्दै ठूलो पानी पऱ्यो रे ।

केही अगाडि एकजना व्यक्तिले टौदहबाट एउटा ढुङ्गा ल्याई देउताको रूपमा स्थापना गरी पुज्न थाले रे । यसरी पूजा गर्दै जाँदा आज एउटा आँखा सुनिने, भोलि अर्को आँखा सुनिने हुँदै गई अन्धो नै हुन पुगे रे । यस्तो भएको देखी पक्का पनि त्यही ढुङ्गो ल्याएको भएर यस्तो भयो भन्ने सोंची त्यो ढुङ्गो टौदहमा नै लगी फालेर नागराजासँग माफ मागेपछि बिस्तारै सन्चो भएर दुवै आँखाले देख्न सक्ने भए रे । माथिका घटनाहरूले टौदह वरिपरिको माटो, ढुङ्गा वा अन्य केही पनि कुरा लिएर जाने कुनै पनि मान्छेको भलो हुँदैन भन्ने प्रमाणित हुन्छ ।

कतिपय टौदहबासी जानकारहरूका अनुसार अहिले नागराजा नागरानीको बासस्थानको संरक्षणका लागि भनी सिमेन्ट लगाएर दहको वरिपरि जुन पर्खाल लगाइएको छ, त्यो पनि नागराजाको लागि अनुकूल छैन । दह वरिपरिको उक्त पर्खाल बनाउँदा नेतृत्वदायी भूमिका खेल्ने कर्कोटक नागराजा नागरानी बासस्थान टौदह समाज नामक संस्थाका अध्यक्ष रहनु भएका रामचन्द्र खड्का पनि उक्त पर्खाल बनाएकोमा सन्तुष्ट हुनुहुन्न । उहाँका अनुसार यसरी टौदहको पानीले नै छुने गरी सिमेन्टको पर्खाल लगाउने काम नाग र अरू जलचरहरूको लागि पनि उपयुक्त होइन । सबैको सरसल्लाह अनुसार यस्तो काम गरे पनि आफू त्यो समाजको अध्यक्ष पदमा रहेकोले आफैले ठूलो दुःख बेहोर्नु पऱ्यो । त्यसै कारणले उहाँले धेरै शारीरिक एवम् मानसिक दुःखकष्ट बेहोर्नु पऱ्यो । अन्त्यमा अध्यक्ष पदबाट राजीनामा दिएपछि मात्रै त्यस्तो दुःखबाट मुक्त हुनुभयो ।

टौदहका नागराजा यति धेरै शक्ति सम्पन्न छन् कि हाम्रो देश नेपालको हर प्रकारको राजनैतिक एवम् प्रशासनिक उतारचढावमा उनको विशेष हात छ भन्ने समेत जनविश्वास पाइन्छ । २०४५ सालमा राजा वीरेन्द्र आएर टौदहको वरिपरि 'वीरेन्द्र पार्क' बनाउने योजना बनाएका थिए रे । त्यही कारणले त्यति बेला देखि नै उनको पतन शुरू भएको भन्ने जनविश्वास पनि छ । देशमा प्रधानमन्त्रीले राजीनामा दिने अर्थात् मन्त्रीमण्डलको नेतृत्व फेरिने बेलामा पनि टौदहका नागराजाले पूर्वसङ्केत गर्छन् भन्ने समेत सुनिन्छ । टौदहको

तहसनहस भएमा काठमाडौँ उपत्यका र राष्ट्रकै तहसनहस हुन्छ भन्ने समेत जनविश्वास पाइन्छ । त्यसकारण टौदहका कर्कोटक नागराजालाई अहिलेसम्म पनि राष्ट्रपालक नागका रूपमा मान्दै आइएको छ । यति मात्र नभएर चीन, भारत, जापान र जर्मनी लगायत अन्य देशका तिर्थालु भक्तजनहरू एवं अनुसन्धाताहरूको समेत बेला मौकामा टौदहमा ओइरो लाग्नुले कर्कोटक नागराजाको दैवी शक्तिकै कारणले यसको अन्तर्राष्ट्रिय महत्व समेत भएको मान्न सकिन्छ ।

टौदह र काठमाडौँ उपत्यकाको आकार उस्तै:

टौदह पोखरीको आकार अष्टाकार हुनु वा पूरै काठमाडौँ उपत्यकाको आकारसँग मिल्दोजुल्दो हुनु र काठमाडौँ उपत्यका जस्तै यसको जुनसुकै कुना वा छेउबाट हेर्दा पनि दहको सम्पूर्ण भाग देख्न नसकिनुलाई यसको विचित्र विशेषताको रूपमा लिइन्छ । यस सम्बन्धमा शर्मा (२०७१) अनुसार चोभारको डाँडा काटी कर्कोटक नागराजा र नागरानीको राज्य भएको कालीदहको पानी बाहिर पठाई उपत्यकालाई मानव बस्ती बस्न योग्य बनाइएको कुरा साँचो हो भने उक्त कालीदहमा सदियौँदेखि शासन जमाउँदै आएका कर्कोटक नागराजा सहज रूपमा उपत्यका छोडेर बाहिर जान नमान्नु, तपाईं नागहरूलाई हामी नजिकै एउटा दह बनाई राखिदिन्छौं, अन्यथा नलिनुहोला भनी अनुरोध गर्दा नागराजाले आनेकाने गरेका, टौदहमा लगेर राखिसकेपछि पनि कालान्तरमा फेरि फर्केर चोभारको गल्छी थुनी फेरि कालीदहमै नागराजाले आफ्नो राज्य खडा गरेको भन्ने किंवदन्तीले पनि नागराजाको कालीदहप्रतिको मोहलाई थप पुष्टि गर्दछ । यति सुन्दर र शान्त कालीदहमा राज गरी बसेका हामी नागहरू अर्को कुनै सामान्य पोखरीमा गई बस्नुभन्दा त बगेरै जानु बेस भनी बाहिर जान थाले । यस्तो भएमा नेपालमा केही अनिष्ट हुने देखी श्रीकृष्ण भगवान् वा मञ्जुश्री र अन्य पात्रहरूले कालीदहबाट धेरै टाढा पनि नपर्ने गरी कालीदहकै (अर्थात् अहिलेको काठमाडौँ उपत्यकाकै) आकारमा उत्तिकै सुन्दर र शान्त दह बनाई राखिदिने शर्तमा उस्तै आकारको बनाइएको हुन सक्ने अनुमान गरिएको छ ।

निचोड

पवित्र तीर्थस्थल टौदह एउटा सानो तर वास्तवमै ऐतिहासिक, धार्मिक रूपले महत्वपूर्ण प्राकृतिक सम्पदा हो । यस अनुपम सम्पदालाई प्रदुषणबाट मुक्त राखी यसको प्राकृतिक मुहान नसुक्ने गरी संरक्षण गर्नुपर्दछ । मनलाई आनन्द, तनमा तन्दुरूस्ती, थोरै धनमा भ्रमण गरी धेरै ज्ञान हासिल गर्न सकिने, काठमाडौंको रिङ् रोड बाहिर तर नजिकै रहेको यो रमणीय स्थल घुम्न नछुटाई यस क्षेत्रमा पर्यटनको विकास, बिस्तार र प्रवर्द्धनमा सहयोग गरौं ।

जय होस् कर्कोटक नागराजा-नागरानीको !

सन्दर्भ सामग्री

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नजिकै बोसन गाउँबाट टौदहको दृष्य

विशाल पौडेल
वरिष्ठ सहायक, ने.ना.उ.प्रा.

आन्तरिक पर्यटन: आवश्यकता, प्राधिकरणको भूमिका र चुनौतीहरू

बालीबाट फर्किएको साथीले फेसबुकमा इन्डोनेसियाको मनमोहक तस्वीर देखाउदा मेरो मन मस्तिष्कमा पनि यसपालीको भ्रमण योजनामा थाईल्याण्ड, इन्डोनेसिया, मलेशिया वा दुबईले प्राथमिकता पाउन थाल्यो । मेरो पनि कभर फोटो नयाँ अपलोड गर्नुपर्‍यो भनि यसो ल्यापटपमा फाइलहरु केलाउदै गर्दा पोहोर साल फ्लाईट मुभमेन्ट एप्लिकेसनको तालिम दिन पश्चिम नेपालका एयरपोर्टहरुको भ्रमणमा जादाँ बाटोमा रोकेर कर्णाली पुलमा कैद गरेको तस्बीर माथि नजर पर्‍यो । एकछिन टोलाएर त्यो यात्रा सम्झिदा लुम्बिनी, काकैं बिहार र घोडाघोडी तालमा बिताएको निकै छोटो तर रमाइलो पल सम्झिए । ७ दिनमा ६ वटा एयरपोर्ट पुगेर फर्कनुपर्ने बाध्यताको माझ बीचबीचमा अफिसको गाडी रोकेर १५ देखि २० मिनेट भएपनि ती ठाउँहरुमा उभिएर अर्को पटक धेरै समय बिताउने गरी आउनेछु भन्ने बाचा गरेको सम्झिए । यसरी ती ठाउँहरुको सम्झनामा डुबेर हराउदै जादाँ मेरो ध्यान अब थाईल्याण्ड, इन्डोनेसिया, मलेशिया वा दुबई भन्दा पनि आन्तरिक पर्यटन तिर झुक्न थाल्यो ।

नेपाल आफैमा विविधताको देश, त्यसमा पनि झन प्रकृतिले साथ दिएर एक अलग सुन्दर पहिचान बनाउन सकेको देश । नेपालमा वर्षैनी लाखौ पर्यटकहरु भ्रमणका लागि आउने गर्दछन् । विशेष गरी पोखरा, सौराहा, काठमाडौँ र लुम्बिनी उनीहरुको प्रथम रोजाइमा पर्दछ । नेपाल भ्रमण वर्ष १९९८ (Visit Nepal 1998) र नेपाल पर्यटन वर्ष २०११ (Nepal Tourism Year 2011) पश्चात अबको भिजिट नेपाल २०२० - लाइफटाइम एक्सपिरियन्स (Visit Nepal 2020 - Lifetime Experience) ले २० लाख पर्यटकहरु भित्र्याउने लक्ष्य राखिएको छ । नेचुरल्ली नेपाल, वान्स इज नट इनफ (Naturally Nepal, Once is Not Enough) को अवधारणानै पर्यटकलाई नेपाल एक चोटी नभई बारम्बार गईरहनुपर्ने भ्रमण स्थलको अनुभुति दिने रहेको छ ।

वि.सं. २०७२ सालको विनासकारी भुकम्प बाबजुद नेपाल अझै पर्यटन र भ्रमणको लागि सुरक्षित छ भनेर विश्वलाई सन्देश दिन भिजिट नेपाल २०२० - लाइफटाइम एक्सपिरियन्स (Visit Nepal 2020 - Lifetime Experience) सन् २०१८ मा मनाउने योजना बनाइएको थियो तर विभिन्न कारणले सन् २०२० मा सर्न गयो । सो विनासकारी भुकम्प पछि नेपाल स्वयमलाई सम्हाल्दै पुनः पर्यटन क्षेत्रमा आफुलाई उभ्याउन लागिपर्‍यो । सायद यहि दृढ विश्वास र प्रयासको नतिजा स्वरुप होला सन् २०१६ मा The World of Wanderlust ले नेपाललाई 'Top 25 Best Destinations in the World List' मा १९औं स्थानमा राख्यो । Rough Guides' को त्यसै बेलाको "Top 10 Best Countries" मा नेपाल पहिलो स्थानमा पर्न सफल भयो । Rough Guides to Nepal का सहलेखक सफिक मेघ्जीका अनुसार नेपालको सँस्कृतिमा नेपालको भुगोल जत्तिनै विविधता छ । नेपाल २०१६ मै 'Best Ecotourism Destinations in Asia' को सुचीमा छैटौ स्थानमा परेको थियो भने लोन्ली प्लानेट (Lonely Planet) को अनुसार सन् २०१७ को Best Value Destination to travel in the year 2017 नेपाल थियो भने उस्कै छुटाउनै नहुने मुख्य १० देशको सूचीमा नेपाल ५औं स्थानमा थियो । यसरी नेपाललाई विभिन्न मुलुकहरुले प्राथमिकता राख्नु एकातिर भुकम्प पछि पर्यटनको माध्यमले आर्थिक सहयोगको भावनाले थियो भने अर्कोतिर नेपालको पर्यटकहरुलाई लोभ्याईरहने विविधता थियो जसलाई भुकम्पले पनि छेक्न सकेन । यसले नेपालको पर्यटन विश्व मानचित्रमा कस्तो रहेको छ भन्ने देखाउछ ।

आन्तरिक पर्यटन किन ?

पर्यटन नीति, २०६५ मा समेत नेपाललाई एक अनुपम प्राकृतिक सौन्दर्य, प्रचुर जैविक विविधता, बहुजातीय, बहुभाषीय, बहुधर्म र सामाजिक विविधता एवं ऐतिहासिक तथा साँस्कृतिक सम्पदाले भरिपूर्ण प्रमुख पर्यटकीय गन्तव्यस्थलको रुपमा परिचित गराइएको छ । यसरी विश्वनै सूचना प्रविधिमा एक सिंगो गाउँ (Global Village) को रुपमा परिणत भइरहेको बेला नेपालले पनि आफुलाई विश्व पर्यटनमा चिनाउन त आवश्यक छदैछ राष्ट्रिय अर्थतन्त्रको विकासको प्रमुख आधार पर्यटन व्यवसायको विविधिकरण र विस्तारद्वारा आम नागरिकको जीविकोपार्जन र रोजगारीका अवसरमा वृद्धि गरी जनताको जीवनस्तरमा सुधार गर्नका लागि आन्तरिक पर्यटन अपरिहार्य छ । नेपाल भ्रमण वर्ष २०२० लाई सफल तुल्याउनुछ भने हामीले आन्तरिक पर्यटनबाट शुरु गर्नपर्छ । आन्तरिक पर्यटनबाट धेरै कुराहरु सिक्न सकिन्छ । आन्तरिक पर्यटनले नेपाल भित्रका भ्रमणस्थलहरु मात्र होइन, त्यहाँको विशेषता र विकटता अथवा सहजता दुबै दर्शाउँछ । नयाँ नयाँ ठाउँको पहिचान हुनुका साथै रोजगारीले पनि ठाउँ पाउँछ ।

आन्तरिक पर्यटनलाई पर्यटन व्यवसायको उपक्षेत्रको रुपमा अघि बढाइनेछ भनेर नेपालको पर्यटन नीति, २०६५ को ८(ग) मा उल्लेख गरिएको छ । यसको कार्यनीतिहरु हेर्दा आन्तरिक पर्यटनको विकास र विस्तारमा जोड दिइने, मुलुकको एक ठाउँबाट अर्को ठाउँमा यात्रा गर्ने नेपाली नागरिकलाई पनि आन्तरिक पर्यटकको

रुपमा मान्यता दिइने; हिमाल, पहाड र तराईका विभिन्न पर्यटकीय स्थलहरूमा नेपाली पर्यटकहरूलाई भ्रमण गर्न प्रोत्साहन गरिने, आन्तरिक पर्यटकहरूलाई आकर्षित गर्न निजी क्षेत्रको समन्वयमा पर्यटकीय प्याकेजहरूको विकास गरी कर्मचारीहरुलाई यात्रा उत्प्रेरणा विदा (Travel Incentive Leaves), शैक्षिक भ्रमण र अध्ययन अवलोकन भ्रमणको व्यवस्थाको लागि प्रोत्साहन गरिने र सबै क्षेत्रमा काम गर्ने जनशक्तिलाई आन्तरिक पर्यटनतर्फ आकर्षित गर्न निश्चित सहुलियतयुक्त बिदासहितको स्थानीय भ्रमण प्रोत्साहन कार्यक्रम (Local Travel Concessions) लागू गरिने भनेर उल्लेखित छ।

नेपालको संविधान, २०७२ को भाग-४ राज्यका निर्देशक सिद्धान्त, नीति तथा दायित्व को धारा ५१ राज्यका नीतिहरूको को उपधारा (ठ) पर्यटन सम्बन्धी नीतिमा नेपालका ऐतिहासिक, सांस्कृतिक, धार्मिक, पुरातात्विक र प्राकृतिक सम्पदाहरूको पहिचान, संरक्षण, प्रबर्धन एवं प्रचार प्रसार मार्फत राष्ट्रिय अर्थतन्त्रको महत्वपूर्ण आधारको रूपमा पर्यावरण अनुकूल पर्यटन उद्योगको विकास गर्ने, पर्यटन संस्कृतिको विकास गर्न आवश्यक वातावरण एवं नीति निर्माण गर्ने तथा पर्यटन उद्योगको लाभ वितरणमा स्थानीय जनतालाई प्राथमिकता दिने भनेर उल्लेख गरिएको छ। यसरी स्थानीय जनतालाई प्राथमिकतामा राखेर आन्तरिक पर्यटनलाई बढाउदै लैजादा स्वदेशी तथा विदेशी दुबै पर्यटकहरुलाई आकर्षित गर्नुका साथसाथै ती ठाउँहरुलाई विश्वको पर्यटनमाझ आकर्षक, रमणीय र सुरक्षित गन्तव्यस्थलको रुपमा विकास गर्नुका साथै पर्यटन व्यवसायले आर्थिक विकासमा ठुलो योगदान दिन सक्छ। आन्तरिक पर्यटनको विकासले सर्वसाधारण र स्थानिय नागरिकमा स्वरोजगारको सिर्जना, ग्रामीण पर्यटनबाट गरिबी निवारण, उनीहरूको जीवनस्तरमा सुधार पनि हुन्छ जो राष्ट्रको अर्थतन्त्रसँग सिधै जोडिएको छ। आन्तरिक पर्यटनद्वारा स्थानिय तहमा आ-आफ्नो ठाउँलाई नेपाल र विश्वमाझ चिनाउन त्यहाँका वासिन्दाहरुले त्यस ठाउँ विशेषका मूर्त-अमूर्त, प्राकृतिक, सांस्कृतिक, जैविक तथा मानव निर्मित सम्पदाहरुलाई प्रचार प्रसार मार्फत क्षेत्रगत विकास गर्दै आन्तरिक पर्यटनलाई पर्यटन व्यवसायको उपक्षेत्रको रुपमा अघि बढाउन सक्दछन्।

आन्तरिक पर्यटनले अब संघियतामा गइसकेको हाम्रो देशका सबै प्रदेशमा उपलब्ध प्राकृतिक तथा सांस्कृतिक स्रोत तथा साधन एवं सीप र प्रविधिको अधिकतम प्रयोग गरी आर्थिक क्षेत्रको सन्तुलित विकासको माध्यमबाट ती क्षेत्रका वासिन्दाहरुको उच्च गुणस्तरीय जीवनस्तरको सुनिश्चिता गर्न मदत पुग्नुका साथै त्यहाँ स्थित बैंक तथा वित्तिय संस्थाहरुलाई पर्यटनक्षेत्र पूर्वाधार विकास तथा पर्यटन व्यवसाय प्रबर्धनमा नीजी तथा सामुदायिक समुहलाइ लगानी गर्न प्रोत्साहित गर्न सकिन्छ।

नेपालीहरु माझ आजकाल आन्तरिक पर्यटन एकदमै प्राथमिकतामा रहेको छ। पर्यटकीय गन्तव्यस्थलहरुमा आजकाल विदेशी र स्वदेशी पर्यटकहरु उत्तिकै मात्रमा देख्न पाइन्छ। वि.सं. २०७२ सालको विनाशकारी भुकम्प पश्चात अलि खस्केको नेपालको पर्यटन अब पुरानै लयमा फर्कनुमा आन्तरिक पर्यटनको भूमिका पनि सराहनीय रहेको छ। नेपालका दुर्गम स्थलमा समेत विस्तारै पूर्वाधारहरुको पहुँच, सडक, खानेपानी, विद्युत, सञ्चार आदिको विकास, पर्यटन पूर्वाधारको विकास, स्थानीय समुदाय र नागरिकको पर्यटन प्रतिको भूमिकामा सरकारसँगको समन्वयता आदिले पनि पर्यटकको संख्यामा बृद्धि भएको छ। आन्तरिक पर्यटनलाई बढावा दिदाँ विदेशी पर्यटक मात्र नभई स्वदेशी पर्यटकले समेत देशको अर्थतन्त्रमा निकै योगदान दिन सक्दछन्।

प्राधिकरणको भूमिका :

नेपालको भौगोलिक अवस्थिति र भू-धरातलीय स्वरुपका कारण हवाई यातायात नै सबै भन्दा भरपर्दो माध्यमका रुपमा रहेको छ। हवाई नीति २०६३ को अवधारणा नै यहि स्तरीय हवाई सेवाको लागि आवश्यक पर्ने भौतिक पूर्वाधारहरु लगायत आधुनिक प्रविधिको प्रयोग गरी छोटो र लामो दूरीको हवाई सेवा संचालन गर्न सक्ने विमानस्थलहरुको विकास गरी अन्तर्राष्ट्रिय मापदण्ड अनुरुप उड्डयन एवं हवाई सुरक्षा (Flight Safety and Aviation Security) लाई सुनिश्चित गर्दै सुरक्षित, सुलभ, मितव्ययी, बजार मुखी, भरपर्दो, एवं प्रभावकारी हवाई यातायातको माध्यमबाट पर्यटन र व्यापार प्रवर्द्धनमा सहयोग पुऱ्याउन सरकारको स्पष्ट नीति हुनुपर्ने आवश्यकता महशुस गरी ल्याइएको हो। यसै बाट प्राधिकरणको भूमिका कत्तिको प्रभावकारी छ भन्ने खुल्दछ। नेपाल नागरिक उड्डयन प्राधिकरण नागरिक उड्डयन क्षेत्रको नियमन, नियन्त्रण एवं सेवा प्रवाहका कार्यहरु प्रभावकारी रुपले संचालन गर्न एउटा सक्षम नागरिक उड्डयन नियमनकारी निकाय (Aeronautical Regulatory Body) एवं सेवा प्रदायी संस्थाको रुपमा रहेको छ। पर्यटन क्षेत्रको पूर्वाधार विकासमा टेवा पुऱ्याउन तथा हवाई सेवालाई व्यापक र सरल बनाउन अन्तर्राष्ट्रिय विमानस्थल तथा क्षेत्रीय अन्तर्राष्ट्रिय विमानस्थलहरुको निर्माण, विकास र संचालन गर्ने देखि नेपालमा बढीभन्दा बढी पर्यटक भित्र्याउन मित्रराष्ट्रसँग द्वीपक्षीय हवाई सेवा सम्झौता तथा सेवा विस्तारमा नेपाल सरकार तथा प्राधिकरणको भूमिका महत्वपूर्ण रहिआएकोछ।

पर्यटन क्षेत्रको पूर्वाधार विकासमा अहम भूमिका खेल्ने हवाई सेवालाई सुरक्षित नियमित र भरपर्दो बनाउन प्रधिकरणले पर्यटन क्षेत्रको विकासमा सरकारको भूमिकामा सहयोग तथा ठूला पूर्वाधार निर्माण र पर्यटन सेवा वा वस्तुको विकास एवं विस्तारमा सहजकर्ता, नियमनकर्ता, समन्वयकर्ता र उत्प्रेरकको रुपमा रहने गरी यस क्षेत्रमा निजीक्षेत्रको भूमिकालाई प्रोत्साहन गर्न सक्दछ। पर्यटन प्रवर्द्धनको प्रचुर सम्भावना भएका मुलुकहरुसँग समानता र पारस्परिकताको आधारमा नेपाललाई अधिकतम फाईदा हुने गरी द्विपक्षीय तथा बहुपक्षीय हवाई सेवा सम्झौता गर्न पहल गरिनेछ भनेर हवाई नीतिमानै उल्लेख गरिएको छ।

प्राधिकरण भित्रबाटनै आन्तरिक पर्यटन प्रवर्द्धनमा सघाउ पुऱ्याउन नेपाल नागरिक उड्डयन प्राधिकरणका कर्मचारीहरुलाई आन्तरिक पर्यटनका लागि नेपाल नागरिक उड्डयन प्राधिकरण कर्मचारीहरुको

सेवाका शर्त र सुविधा सम्बन्धी नियमावली, २०५६ (संशोधनसहित) को नियम ५.३ को उपनियम (६) ले निर्देशिका बनाई मिति २०७०/०९/०१ देखि लागु गरेको छ जसको फलस्वरुप नियमानुसारको अवधि पुगेका कर्मचारीहरु सो निर्देशिकाको अनुसूची - १ मा रहेको आन्तरिक पर्यटनका लागि छनौट भएका स्थानहरु मध्ये जुनसुकै स्थानमा आन्तरिक पर्यटन भ्रमणमा जान सक्दछन् । यसले नेपाल भित्रका पर्यटकीय स्थलहरुलाई पनि फाइदा पुगेको छ। प्राधिकरणका कर्मचारीहरुले सो ठाउँमा भ्रमण गर्दा त्यहाँको प्रचार प्रसार हुनुका साथै त्यहाँ आर्थिक सहयोग त हुन्छनै, कर्मचारीहरुले फर्केपछि पेश गरेको भ्रमण प्रतिवेदनका आधारमा अन्य सरोकारवालाहरुको सहयोगका साथ त्यस्ता ठाउँहरुको पूर्वाधार विकास तथा प्रबर्द्धन कार्य दुबै सम्भव हुन सक्दछ।

चुनौतीहरुः

आन्तरिक पर्यटनको विकास त्यति सहज भने छैन । यसमा केही चुनौतीहरु पनि छन् जस्तैः

- धेरै जसो ठाउँहरुका पर्यटकीय क्षेत्रमा बाटो घाटोको र सूचनाको राम्रो सुविधा छैन, जसका कारण पर्यटकहरु जोखिमपुर्ण यात्रा गर्न बाध्य हुन्छन् । यसका अलावा भौगोलिक भू-संरचनाको विकटता र विषम हावापानी र न्यून दक्ष पर्यटन व्यवसायी पनि आन्तरिक पर्यटनको चुनौतिको रुपमा रहेका छन् ।
- पर्यटन व्यवसायका लागि चाहिने आवश्यक भौतिक पूर्वाधारको सहज विकास हुन नसक्नु र यसको प्रबर्धन तथा विकासका लागि निजी क्षेत्रको सहभागिता न्यून हुनु, पर्यटन क्षेत्रमा संलग्न जनशक्तिलाई उपयुक्त प्रशिक्षण दिन नसक्नु पनि चुनौतीपुर्ण रहेको छ।
- देशका विभिन्न स्थानमा रहेका पर्यटकीय गन्तव्य स्थल तथा तिनीहरुको पदमार्गहरुको पहिचान र प्रचार प्रसार नहुनु र पर्यटन क्षेत्रका साझेदारहरुको पूर्वाधार विकासमा भन्दा प्रबर्द्धनात्मक कार्यमा बढी संलग्न हुँदा यो क्षेत्रले लगानीमा प्राथमिकता पाउन नसक्नु पनि पर्यटन क्षेत्रको विकासमा रुकावट बनेको छ।
- पर्यटन सूचना प्रणालीको राम्रो विकास हुन नसक्नु र स्थानीय स्रोत साधनको समुचित उपयोगको लागि क्षमता विकासका अवसरहरुको अभाव हुनु जस्ता समस्याहरुले पर्यटन क्षेत्रको विकासले आशागरेको जस्तो गति लिन सकिरहेको छैन।
- पर्यटन व्यवसायको एकिकृत विकासका लागि समन्वय र सहकार्य नहुनु र पर्यटनजन्य क्रियाकलापलाई वातावरणमैत्री बनाउन नसक्नु पनि चुनौतिको रुपमा रहेको छ।
- नेपाल आउन खोज्ने विभिन्न देशका पर्यटकहरुलाई सोझै नेपाल सम्म आउनसक्ने भरपर्दो हवाइसेवाको सञ्जाल विस्तार गर्न सकिएको छैन भने नेपाल भित्रै आन्तरिक उडानहरुको क्षेत्रको कभरेज राम्रो हुनसकिरहेको छैन।

यी र यस्ता विभिन्न खाले चुनौती र समस्याहरु छन् तर आँटे के सम्भव हुदैन भनेझै हामी लागी पर्‍यौं भने यस्ता सबै समस्याहरुको निराकरण गरी आन्तरिक पर्यटनको माध्यमबाट नेपालको पर्यटनलाई विकास गर्दै विश्व पर्यटनको मानचित्रमाझ नेपालको पर्यटनलाई चिनाउन सकिन्छ।

अन्तमा :

विदेशी पर्यटकतर्फ मात्र केन्द्रित सोचले नेपालका केही छानिएका गन्तव्यस्थलहरुले मात्र पर्यटनमा फड्को लिन सक्दछन्होला तर स्वदेशी पर्यटक समेत आकर्षित गर्ने गरी प्रचार गरिएको आन्तरिक पर्यटनले सिँगो नेपाललाई पर्यटनमा फड्को मार्ने मौका दिन्छ। पर्यटन सम्बन्धी सूचना तथा प्रमुख सूचकहरु तयार गरी, तथ्य अद्यावधिक एवं सूचना प्रविधिका माध्यमबाट मुख्य पर्यटकिय गन्तव्यस्थलहरुको प्रचार प्रसार गर्नका साथै सूचना प्रणालीको विकास तथा डकुमेन्ट्री तयार गरी सो सूचना देश विदेशमा विस्तार गर्न सकिन्छ।

विशेष गरी अहिलेको युवा पुस्ता जो साहसिक पर्यटनमा विशेष रुची राख्दछन्, मुस्ताङ्गको मुक्तिनाथ यात्रा, रारा तालको ट्रेकिङ्ग होस या पोखराको प्याराग्लाईडिङ्ग वा अहिलेको आकर्षण बनेको जिपलाइनिङ्ग वा नेपालका कुनाकाप्चामा पुगेर रमाउँदछ । यसरी हिड्ने मार्गको सहजता, पुग्ने ठाँउमा आवश्यक तथा पर्याप्त बस्ने तथा खाने होटलहरुको व्यवस्था, आवश्यक पर्यटकीय पूर्वाधारको विकास, दक्ष जनशक्तिको पर्यटनमा प्रयोग, पर्यटकीय स्थलहरुको व्यवस्थित पहिचान र विज्ञापन, पर्यटन सूचना प्रणालीको प्रयोग अनि सहकारीताका साथ आन्तरिक पर्यटनलाई बढावा दिने हो Malaysia Truly Asia जस्ता विज्ञापन हेरी मन मस्तिष्कमा विदेशको भ्रमण योजना बनाउने म र म जस्ता थुप्रै नेपाली आन्तरिक पर्यटनमा रमाउन र अबको भिजिट नेपाल २०२० - लाइफटाइम एक्सपिरियन्स (Visit Nepal 2020 - Lifetime Experience) र नेचुरल्ली नेपाल, वान्स इज नट इनफ (Naturally Nepal, Once is Not Enough) लाई सफल बनाउन पर्यटन वर्ष २०२० को तयारीमा जुट्नेछौ।

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