

**THE ROLE OF THE GOVERNMENT AND NON-GOVERNMENT ORGANIZATION
TOWARDS THE AVIATION SAFETY BY MINIMIZING THE WILD HAZARD PROBLEM
FROM TIA AND OTHER AIRPORT OF NEPAL**

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Background:

The landlocked country Nepal is situated in between China in the North and India in the west, south and east. The Country is elongated east, west and average length is approx. 795 km where as north, south is very narrow and uneven and the width is ranging from 140 km to 230 km. Geographically the country can be divided into there ecological strips such as:

1. *High Himalayas*, perpetually a snowy region, is extremely mountainous with elevation rising from 4877 meters to 8848 meters above the sea level. The major occupation of the people of this region is sheep and yak grazing.

2. *Middle Mountain*, is predominantly hilly with some patches of flat river basins and valleys here and there and has an elevation ranging from 610 meters to 4877 meters from sea level. Though it covers the largest area of the country, only 10% of its area is cultivable.

3. *Terai region*, is a narrow tropical belt comprising the foothills and extends from east to west along the southern part of the country. This flat land has an elevation ranging from 60 meters to 610 meters above sea level. About 40% of this region is under cultivation. The main east west highways run along this area.

Nepal is a unique country, rich in heritage. Although a small and poor country, it is noted for its glorious history and diverse ethnic communities of Australiod, Mongolian and Aryan stocks, which well in different parts of the kingdom and until now have preserved some fascinating culture traits of the prehistoric or mythological times.

Thus, with such geographical landscaping, cultural heritage and natural beauty, Nepal is well known in the international arena as a prime destination for tourists. But being a mountainous country Nepal had faced many difficult situations for providing surface accessibility through different modes of transportation. Thus maximum utilization of its airspace for the purpose of air transportation became one of the basic needs for overall development of the country. The accessibility to backward and remote areas can be

achieved through the development of civil aviation community domestically and internationally. Under this consideration Nepal became the member of International Civil Aviation Organization (ICAO) by signing Chicago convention on 29th June 1960.

Today I am going to brief you some important activities of the Tribhuvan International and other airport of Nepal.

The Tribhuvan International Airport (TIA), situated 5.56 km east of Kathmandu City is in the heart of the Kathmandu Valley. TIA is amid the confluence of three ancient cities viz. Kathmandu, Bhaktapur and Patan, rich in their art and culture not only gifted for their temples and pagoda - but above all they possess smiling men and women, the pride of the nation. Hence TIA not only has flourished as the main hub for every expanding business of the country but also has proudly catered to various domestic and international airlines.

The main objective of the Tribhuvan International Airport (TIA) is to develop, operate and maintain facilities and services essential for safe and efficient operation of air transportation as well as for passengers.

The rapidly changing global business environments putting TIA at the center of world trade for Nepal.

Tribhuvan International Airport (TIA) lies in the Kathmandu and it is the only international airport of Nepal where many international flights are in operation. Some of them are Royal Nepal Airlines, Jet Airways, Druk Air, Indian Airlines, Biman Bangladesh, Air China, Thai International Airways, Qatar Airways, Gulf Airways, Australian Airlines Group, Martin Air, and Pakistan International Airways.

The geographical situations of the TIA are very critical during the airlines landing and take off time. Beside the airport surrounding almost covering by the many local inhabitants where many people of these localities have cultivated some types of cash and food crops like vegetable and other and rests of them are involving in business like restaurant and other meats sell. Where the local communities have livestock and they have animals like the cow buffaloes, bulls, goats, dogs, and cats as they are grazing and feeding from such areas also.

TIA airport areas are covering by many houses, forest, river, and ring road and industries in all sides of the location. In the southeast face of the TIA there is a great temple of the lord Shiva called the Pashupati Nath temple where the Bagmati River is flowing in its downstairs.

In the north west face of the TIA there is huge cultivation land where crops like paddy, maize, millet, wheat grain are cultivating.

Altogether there are 6,7,8,9,34,35-ward numbers are covered by the TIA. Therefore the sort of waste has been increasing due to the habitats and other sources which directly causes the wildlife and bird hazard attraction.

Likewise other areas of the side are constructing many building and houses because the migration rate has been increasing in the present situation due to Maoist problem arises in rest part of the country.

At the same time there is increasing traffic in TIA Surrounding, which creates the additional problem of the locality.

Due to such reason, the types of waste of the local habitat have been increasing, which become the feed for many wild life and bird to have the opportunity to graze therein. These are some factor to encourage the animal and birds to create the problem to bring the greatest risk to the airlines. Since the concern authority of solid waste management of these area has not been identified yet except KMC. Therefore, still the solid waste management problem of TIA is in high ratio.

Considering such damaging environmental scenario of the TIA and its surrounding, we group of the environmental journalist and the activist have organized the program to pay the attention to the concern authority on such problem immediately after the first bird strike accident has occurred in 1996. Which bird hit to Thai Airways that was grounded 4 days. After such incident, the government and other concern authority have not worked seriously expect they have some meeting.

Thereafter we realize the seriousness of the problem and disseminate the information and make publicity in the newspapers and the media's while one after another the airlines have began to collide with birds in such mid period.

Seeing the worst scenario of the airport we further stressed the CAAN and TIA to start some action oriented public awareness activities with the community level.

Till the 2002, the CAAN has not paid any serious attention to start awareness program among the TIA surrounding community however we tried our best to press them continuously.

When the next bird collides had taken place than the then government realized the issues of such accident. We heard the government and other groups have organized the meeting in Kathmandu to discuss the bird strike issues, we came to know that seven recommendation has been made by the USA bird strike committee Chairperson Dr. Richard A. Dolbeer to minimize wildlife and bird hazard problem of TIA. These are as follows;

- a) Bird strike data base
- b) Garbage and for waste control
- c) Development of bird control unit
- d) Habitat management
- e) Field control program and automated bird dispersal acoustic system
- f) Bird control commits for TIA
- g) One year study of birds in Kathamndu area

Thereafter the CAAN has requested us to start the community awareness program in TIA base on Dr. Dolbeer's Recommendation. Than we made the agreement with CAAN to work in TIA and its airport surrounding and has started to work in such community since 2003 which program is still in operation.

We organized the different activities in TIA suunding to create the awareness program such as rally, demonstration, training, and orientation, interaction in each ward. Such community bases program has brought the many changes to manage the solid waste from these localities.



PHOTO

Glimpse of candle lightning on National level consultation meeting of SOPEJ for WBCP.

Now the problem has minimized in some extent and there has not been heard the any news of occurred bird incident. Seeing such performance, the CAAN has allocated the budget for Pokhara airport for the fy/2004/2005
Which too, we have recently conducted the initial phase work at Pokhara airport in last 2004 November to -February 2005.



Both airport programs have conducted by the technical cooperation of the Kathmandu Metropolitan and Pokhara Sub-Metropolitan City, which has also been appreciated by many concern institute and organization.

Now we are going to explain you that how do we implement the Dr.Richard Recommendation and mobilize the community of these solid waste.

How do we work?

We visited the site of all location and identified the major issues of these localities and try to found what are the reason for bird and wild hazard attraction? We have conducted interaction program with the local people, village leader, activist and environmentalist.



PHOTO

Vice - President Dipak Adhikari discussion with CAAN / TIA high level officials

We provide the Art board paper, Marker, training Sheet ,Thumb pin , masking tape ,Compost bin, Poster ,pamphlets EM liquid, pen and copy etc. as training materials.

What we have done before 2003 ?

- ❑ Formation of WatchDog to work as a Pressure group
- ❑ Meeting follow up with CAAN /TIA & KMC
- ❑ Door to Door follow up with TIA surrounding community.
- ❑ National Level Consultation meeting with / HMG / NGOs /CBOs/Journalists/Students/Teachers/Community Activists/ Local Leaders
- ❑ Report writing.
- ❑ Make the necessary recommendation to the HMG.
- ❑ Project launch based on the recommendation.



What we have done after 2003 ?

1. Bird control committee establishment.

We formed the project Coordination and Management Committee (PCMC) of 17-member organization. Under the umbrella of PCMC we have founded the project coordination committee (PCC) of 13 member in each words No.6, 7,8,9,34,35. It's a top-level project Co-ordination & management Committee of WBPP. SOPEJ is the executive agency of PCMC. Individual membership does not entertain in this Committee. PCMC works as Bird Control Committee under the umbrella of SOPEJ.



Executive Chairman Ram Mani Thapaliya motivating the community activists

PCC was established to coordinate between PCMC, CMC and SOPEJ will play the executive agency role and deal with CAAN and TIA. Under the PCC there are 10-member Community Mobilize committee (CMC) is formed and associated with Kathmandu Metropolitan ward office. CMC is a Grass root level equal gender participatory group of individual activist. There are 3 CMC under the each PCC.

2. Capacity building and training oriented work:

We provide the training indoor and outdoor on the basis of programme nature. We have provided the capacity building training to the PCMC and PCC, accordingly PCMC and PCC provide trainings to the CMC. Than SOPEJ conducted the WBPP to make aware the people about the correlation between environmental sanitation and bird collide and aviation safety as well.



Glimpse of training on TIA - WBPP.

SOPEJ aims to build up the capacity of that village level committee up to PCC and PCMC to perceive the best practices from them to achieve the project goal.

3. Action oriented community based awareness activities:

- ❑ Rally
- ❑ Poster / Pamphleting
- ❑ Organic Composting Demonstration
- ❑ Conduct Cleaning movement
- ❑ Student mobilization & motivation
- ❑ Women empowerment Program



Rally and cleaning movement of SOPEJ among TIA Surrounding community .

SOPEJ-Nepal feels the needs of these committees to sustain the WBPP project. For that propose there is question of those village level committees sustainability.



Reasons for bird activities in TIA:

According to our findings the following are the reason for bird activities in TIA.

1. Search for Food:

Due to Open shutter house in aerodrome vicinity, Garbage, Earthworm, insect, rodent, frog etc. bird has been increasing to search for the food.

2. Search for water:

There are some rivers in the airport areas namely Bagmati and Manohara river near to the airport likewise there is a Lot of water patches seen near the runway-curing monsoon.

3. Shelter:

At the same time there are forest like Gorkana and Pasupati Jungle (Bankali) to provide the shelter to the bird.

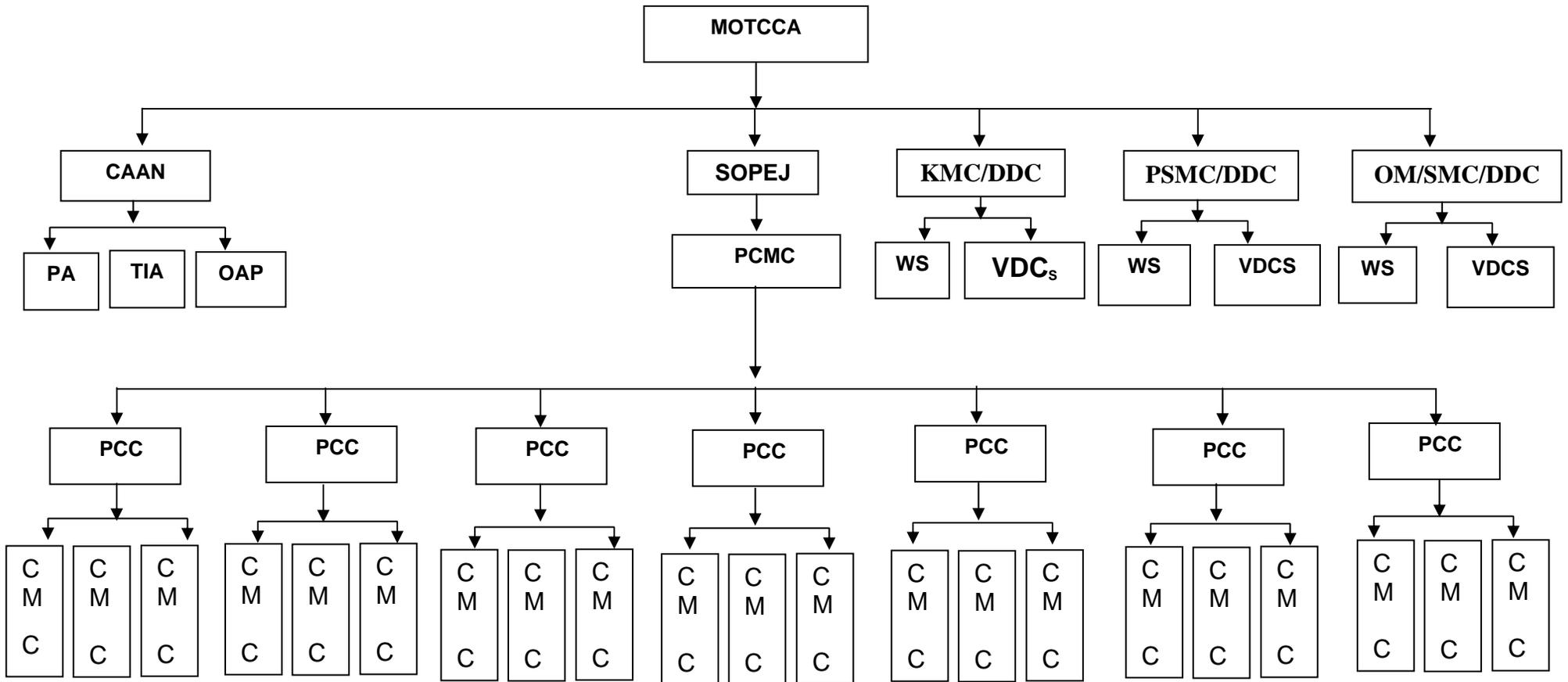
4. Playground for birds:

There are quite open airspaces for playground for birds.

Following are some of the local community, activist, environmental institute, and club those are associated with PCMC.

- 1.Sagarmatha Environment development center,
2. Samabista-Nepal
3. Deurali Club
- 4.King kom sports clubs
- 5.Jan jagaruk safa sugdhar abhiyan
- 6.Batabaran tatha samagra bikas sanstha
7. Nepal pollution control and environmental development centre
- 8.Nepal multipurpose cooperative
9. Jayababa pashupati mahila bikash sanstha
10. Srijanshil yuba club
- 11.Nature Conservation club
- 12.Community sanitary club
- 13 Sinamangal nagarik samaj
- 14 Sumkot samaj shudhar samitee
- 15.Mission for health and sanitaion
16. Airport site youth sports club.
- 17.Kramik Society

Organogram of TIA-WBPP :



Recommendation made by the SOPEJ to CAAN, Metro and Sub-metropolitan City:

- ❑ Airport must be kept clean and maintained at high standards so that the correct cleaning and maintenance of the aircraft is possible. If the aircraft is starting on the dirty ramp, it may suck in light materials causing either the engine damage or blade wear.
- ❑ Dirty airport environment attracts birds, insects, and earthworms etc in the grass area adjacent to the runway also attracts birds. Concentration of birds in an around the airport causes a lot of problems like bird hit, flight delay or sometimes aerodrome closure. TIA is usually having this sort of problems. To minimize such problems, airport environment must be kept clean and there must not be any dumping sites within the vicinity of the airport. For this, there is the strong need of integrated and cooperated approach from all the local people, government agencies, NGOs, airlines and aviation authorities.
- ❑ Each airport is unique in that it will have its own set of problem of birds and mammals. Many of the small mammals are prey for either birds or other mammals and therefore increase the probability of wildlife incident. The airport operations must administer effective control programs. Long-term activities such as building modifications, drainage and vegetation modifications will have to be planned for the wildlife management. The ideal situation of course, would be to select the airport development sites that have habitat types not conducive to flocking birds.
- ❑ Wildlife control programs will disperse dissuade birds from becoming established at AP, however, the idea situation, would be to select the AP development sites that have habitat types not conducive to flocking birds.
- ❑ Each airport must implement a site-specific program; must appoint airport wildlife control officer and a wildlife control committee (WCC) with representation from Airport maintenance staff, ATS, RFF flight service, airside safety personnel, tenants, security personnel etc.
- ❑ Strike should be reported. WCC should analyze data.
- ❑ Have knowledge of behaviors of birds and mammals.
- ❑ Habitat management plan, not to attract birds and mammals.
- ❑ ATC to report to pilots (bird activity) and pilot should also report to ATC (off-airport bird activity)

Pilots to use landing lights during take-off, climb, descend and approach phases allowing birds more visible and providing greater chance to avoid aircraft.

- ❑ Every strike should be reported
- ❑ Improvement of waste collection and transportation system
- ❑ Sanitary landfill site

- ❑ Promotion of special waste management system
- ❑ Organizational Development and Institutional strengthening of KMC and other stakeholders
- ❑ Human Resource Development and monitoring
- ❑ Promotion of house holds, small and large scale recycling schemes.

Conclusion:

Aviation safety, as is obvious is the paramount in the field of air transportation. All authorities or personnel concerned must work in harmony with each other to maintain the spirit of attaining the safety goals. There must be safety awareness among each institutions or individuals.

Bird strike is not a problem for Nepal only this is a worldwide problem. This cannot be controlled by a single sector. Good cooperation and necessary coordination is required from all concerned sectors. Perhaps it might not be wiped out completely but it can be minimized if better measures can be taken by adopting said recommendation in the context of Tribhuvan International Airports and other airports of Nepal.



Birds Species at Tribhuvan International Airport and Vicinity		
S. No.	Species	Type
1.	Bank Myna	R
2.	Barn Swallow	R
3.	Baya Weaver	R,S
4.	Black Bulbul	R
5.	Black Drongo	R
6.	Black Geaded Shrike	R
7.	Black Kite	R,S
8.	Blue Rock Pigeon	R
9.	Cattle Egret	R
10.	Common Kestrel	R
11.	Common Myna	R
12.	Common Stonechat	R,W
13.	Common Swift	R
14.	Crested Serpent Eagle	R
15.	Eurasian Free Sparrow	R
16.	European Goldfinch	W
17.	Green Bea Eater	R,S
18.	Hodgson's Red Start	R,W
19.	House Crow	R
20.	House Sparrow	R
21.	Jungle Myna	R
22.	Little Egret	R
23.	Nepal House Martin	R
24.	Oriental Magple Robin	R
25.	Paddy Field Pipit	R
26.	Pariah Kite	R
27.	Pied Bushchat	R,S
28.	Pied Kingfisher	R
29.	Pond Heron	R
30.	Red Avadavat	R
31.	Red Vented Bulbul	R
32.	Rose Ringed Parakeet	R
33.	Scaly Thrush	R,M
34.	Spotted Dove	R
35.	Spotte	R
36.	Steppe Egale	W
37.	White Rumped Munia	R,S
38.	White Troated King Fisher	R
39.	White wagtall	R

Media Coverage of WBPP:

Bird hazard still persists at TIA

POST REPORT
KATHMANDU, April 19

Tribhuvan International Airport (TIA) is not yet free from bird hazards. According to officials at TIA, the danger of accidents resulting from plane collision with scavengers is still a risky problem.

With the depletion of the food supply for birds in other parts of the city with rapid urbanization, a small luxuriant forest near the airport has become the only source of food for birds.

Ram Mani Thapaliya, executive director of the Society of Population and Environment Journalists, said that TIA is still home to 39 of the 843 species of birds found in Nepal. He was speaking at the inauguration of a ten-day-long seminar on flight safety, which got underway here today.

Thapaliya said that three years ago, there were eight accidents at TIA due to bird collision with planes in just a single month.

"It was due to lack of an alternate dumping site [which at that time was quite near the airport]," he added.

Nagendra Prasad Ghimire, director general at the Civil Aviation Authority of Nepal (CAAN), said "Even a minor collision with birds can cause serious fatality to an aircraft."

Ghimire added that TIA has several mechanisms in place to avoid such mishaps. "One of them is scaring away birds, or dispersing them by producing sounds."

However, he argued that without awareness about safety among the people, this problem would be difficult to solve.

Abundance of earthworms at the airport, nearby slaughterhouses

and dumping waste in the open attracts scavengers, which naturally makes birds flock to TIA for food, officials said.

We have employed hunters to scare away the birds to ensure flight safety and spread chemicals to kill the earthworm, said general manager of TIA, Keshav Raj Khanal.

"Tourism is a serious business, and it is important to ensure the flight safety of tourists coming to Nepal," said Tek Bahadur Dangi, CEO of Nepal Tourism Board.

He said that bird-related mishaps in TIA have frequently affected Nepal's tourism.

Despite the present situation, the industry registered a growth of 23 percent in 2003 and has increased to about 50 percent during the corresponding period this year, he added.

Bagmati filth poses bird-hit threat to planes

Himalayan News Service

Kathmandu, April 19

Environmentalists have stressed the need for keeping the Bagmati river banks cleaner by discouraging people from dumping garbage there and making people aware of the environmental hazards in the area to prevent bird menace at the Tribhuvan International Airport.

They also expressed their deep concern over the government ignoring the risk posed by the birds at the airport.

The problem of birds hitting against the aeroplanes at the TIA can be addressed if the government works to establish a proper waste management system along the Bagmati river banks, said Ram Mani Thapaliya, executive director of the Society of Population and Environment Journalists (SPEJ). "The government should take more responsibility to deal with such problems but the communities can play greater and more effective role to keep their area clean," he said. He was speaking at the inauguration of a ten-day orientation programme on bird related problems on air safety organised by SPEJ today.

Of 843 species of birds found in Nepal, 39 are found in the vicinity of the TIA while scavengers are the most common birds that hit aircraft. Experts claim, Nepal ranks second in the world with most cases of birds hitting the aircrafts.

Pointing out that bird-aircraft collision are suicidal for the tourism industry, Tek Bahadur Dangl, chief executive officer of the Nepal Tourism Board said such incidents portray negative image of the country in the international community.

Nagendra Ghimire, director general of the Civil Aviation Authority of Nepal (CAAN) said the causes of increase in bird activities at the airport should be addressed.

व्यापक साइटको सञ्चालनपछि विमानस्थलमा चराहरूको संख्यामा कमी

सञ्चालन पछि साइटको सञ्चालनपछि विमानस्थलमा चराहरूको संख्यामा कमी आएको छ।

चराका कारण पोखराका हवाई उडान जोखिमपूर्ण बनेको ठहर

पोखरा विमानस्थलमा चराहरूको संख्यामा कमी आएको छ। चराहरूको संख्यामा कमी आएको छ।

सुरक्षित उडानका लागि चराचुरुङ्गी बाधक

सुरक्षित उडानका लागि चराचुरुङ्गी बाधक। चराहरूको संख्यामा कमी आएको छ।

चराका कारण विमान दुर्घटना बढी

चराका कारण विमान दुर्घटना बढी। चराहरूको संख्यामा कमी आएको छ।

चराहरूको संख्यामा कमी आएको छ।

Abbreviation:

MOTCCA	=	Ministry of Tourism Culture and Civil Aviation.
CAAN	=	Civil Aviation Authority of Nepal
SOPEJ	=	Society of Population & Environment Journalist- Nepal.
KMC	=	Kathmandu Metropolitan City.
PSMC	=	Pokhara Sub-metropolitan City.
DDC	=	District Development Committee
OM/SMC	=	Other Metro, Sub-metro and Municipality
WS	=	Wards
VDCs	=	Village Development Committee
PCMC	=	Project Coordination & Mngement Committee
PCC	=	Project Coordination Committee
CMC	=	Community Mobilize Committee
TIA	=	Tribhuvan International Airport
PA	=	Pokhara Airport
OA	=	Other Airport
WCC	=	Wildlife Control Committee
WBCC	=	Wild life and bird Control Committee
BCC	=	Bird Control Committee
WBPP	=	Wild life and Bird Hazard minimise Public awareness Program
CBOs	=	Community Based Organisations
GOs	=	Government
NGOs	=	Non-Government Organisations
R	=	Residential
S	=	Spring Visitor
W	=	Writing Visitor
PM	=	Passing migratory
ATC	=	Air Traffic Controller
AP	=	Airport
ICAO	=	International Civil Aviation Organization
RONAST	=	Royal Nepal Accademy for Science and Technology

References:

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- ❑ Horizon, May 2003
- ❑ RONAST Report, Airport 2002
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