







# Report on a A WILDLIFE LAW ENFORCEMENT TRAINING WORKSHOP FOR FIELD STAFF IN THE NOMROG STRICTLY PROTECTED AREA, MONGOLIA September 18 – 25<sup>th</sup> 2007



#### IN CONJUNCTION WITH

The State Border Defence Agency, Regulatory Agency of the Government of Mongolia

The State Specialized Inspection Agency, Implementation Agency of the Government of Mongolia

The Protected Area Authority of the Mongolian Ministry of Nature and Environment

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## **Executive Summary**

A wildlife law enforcement-training workshop was conducted during  $18-25^{th}$  September 2007 in the Nomrog Strictly Protected Area, eastern Mongolia. This followed from a previous workshop held at Nomrog in 2006. Fifteen border patrol staff, state inspectors and park rangers participated in the workshop. Mongolian Government officials and international conservation specialists assisted with instructing the program.

The primary purpose of the workshop was to develop improved staff capacity for wildlife protection to counter the threats from poaching and illegal wildlife trade. The workshop covered topics of relevance to the work of Mongolian wildlife protection staff. This included conservation philosophy, laws and legislation, protected species identification, navigation, patrol reporting and techniques for making environmental inspections.

A comprehensive staff training curriculum (Lynam, 2006) was translated into Mongolian language for use by training participants. This was adapted from existing training materials and new materials written specifically for the purpose.

According to an evaluation of the course (Annex 3), participants said they had learned a great deal about conservation and threats to wildlife, and navigation concepts, and thought they could apply this knowledge in their work. Concerning law enforcement and monitoring, forty percent said the learned a fair amount of new information, fifty percent said they had learnt a lot and ten percent said they had learnt a great deal and could use this knowledge in their work. Participants said the training manual was extremely useful.

Participants suggested the instructors were easily understood, answered questions, listened well, provided useful examples, translations were effective, allowed for participant interaction, adapted content to our needs/situation, presented something useful/valuable.

Participants said the most useful parts of the workshop were; field practice, working with compass and GPS, maps and mapping, wildlife threats, joint patrolling, the combination of lesson and field practice, the assistance of WCS in helping the Govt of Mongolia to enforce laws related to wildlife, and increased knowledge of wildlife conservation and patriotism.

Participants suggested that the workshop had helped foster improved collaboration between agencies responsible for national security on the one hand, and environmental conservation on the other, in conserving wildlife. WCS would be in a position to further this collaboration if a permanent or seasonal field presence could be established in the Nomrog SPA. This would allow WCS to monitor, evaluate and adapt wildlife protection efforts at the site in partnership with the State Border Defence Agency and Nomrog SPA staff. In the interim, WCS has provided additional field equipment items to border guards and protected area staff, including standard topographic maps, compasses, patrol forms, binoculars, spotting scopes and GPS.

## **Acknowledgements**

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#### Introduction

The Nomrog Strictly Protected Area, located in Mongolia's Eastern Steppes supports populations of a number of regionally and globally threatened wildlife species including Red Deer, Roe Deer, Manchurian Moose, Grey Wolf, and Lynx. This reserve is threatened by a range of factors the main one being unsustainable wildlife harvest (Lynam, 2005a, Heffernan, 2005, Olson et al., 2004). This is caused by (1) cross-border incursions, encroachment and poaching by foreign nationals, (2) poaching and habitat destruction by government staff who live in the protected areas, and (3) poaching by influential Mongolian and foreign outsiders. In general illegal hunting and wildlife trade are the greatest threats to Mongolia's wildlife and will lead to species extinctions if action is not taken (Zahler et al., 2004, Winguard and Zahler, 2006). Efforts to reduce these threats can succeed if border guards, the only resident staff in the reserve, exercise the legal mandate to enforce environmental laws, if they themselves respect the law, if staff capacity can be raised to enable environmental law enforcement (Heffernan et al., 2005, Lynam, 2005a), and if they are able to effectively coordinate wildlife enforcement activities with other relevant agencies. Collaboration between enforcement agencies in protecting wildlife has become standard practice in other parts of Asia (Lynam, 2004, Lynam, 2005b). This is a report on a wildlife protection-training workshop held during 19 – 25th September 2007. This followed from a similar workshop held during September 2006 and a training needs assessment conducted in 2005.

## **Purpose**

To strengthen the legal and enforcement capacity of Mongolia through wildlife protection training of border defence staff, park rangers and local enforcement staff in the Nomrog Strictly Protected Area, Dornod Aimag.

# **Objectives**

- (1) To develop staff capacity in wildlife conservation principles, field craft, awareness of laws and regulations, and practical techniques for applying environmental laws, so as to
- (2) Reduce cross-border incursions, habitat encroachment and poaching, and
- (3) Reduce poaching and habitat destruction by Mongolian and foreign nationals.

## **Training manual**

A Mongolian language-training handbook was compiled from existing sources and new material, and adapted for use in staff training at Nomrog. The introductory section (Modules 1-3), and sections on environmental laws and protected status of Mongolian wildlife (Module 4), good environmental practices (Module 7), use of equipment (Module 9), and roles of protection staff in monitoring (Modules 12) were adapted from an unpublished (1996) Mongolian ranger training manual by Mark Johnstad, Richard Reading and James Wingard. David Lawson wrote sections on enforcement patrol activities (Module 5) and planning and leading law enforcement activities (Module 6). Sections on map and compass (Module 10), and tracks and sign (Module 13) were adapted from Alan Rabinowitz's (1993) Wildlife Field Research and Conservation Training Manual. Antony Lynam wrote the section on the use of Sections on field-note taking (Module 15) and information from GPS in navigation. specimens (Module 16) were adapted from White and Edwards (2000) Conservation research in the African rain forests: a technical handbook. Amanda Fine and Kirk Olson provided comments and inputs on the first drafts, which improved the final version. Areas that were not covered in the current version of the manual but may be added in future include

techniques for assessing resource use in local communities, techniques for working effectively with wildlife users and other stakeholders, and nature-based tourism principles.

## **Training curriculum**

The training curriculum for this workshop consisted of three parts all taken from the training handbook. During the time available for this workshop, eight training modules were taught. Part I was an introductory section consisting of three modules. The first module introduced the philosophy of protected areas in Mongolia and why they are important for protecting wildlife and was taught by an international wildlife specialist (Lynam). The second module described the protected areas of Mongolia and the biodiversity they contain are threatened and why should we be concerned about it, and was taught by a former Mongolian protected area manager (Sukhtulga). A third module taught by Lynam illustrated how rangers, border guards, police and other staff have roles to play as wildlife protection staff.

Part II covered the topic of legislation and law enforcement and consisted of two modules. The first module covered the laws and legislation that allow for the protection of wildlife and protected areas, and illustrated which species are protected by Mongolia Red Data book, laws on hunting, protected areas and fauna, and international protection classifications such as CITES. This was taught by state inspectors (Badam, Tumurbaatar) and an international wildlife specialist (Lynam). A second module concerned the practical enforcement of laws and describes techniques and reporting procedures that may be used by enforcement staff. This was taught by the senior border patrol officer (Erdenbat) and an international wildlife specialist (Lynam).

Part III covered field craft and consisted of modules on navigation techniques (map and compass, and Global Positioning Systems (GPS). Part IV covered natural resource assessment and included modules on practical techniques for identifying wildlife from their track and sign. Parts III and IV were taught by international wildlife specialists (Lynam and Olson).

# **Participants**

Fifteen Mongolian Government staff participated in the training workshop (see Annex 1). Eight participants were State Border Defence Agency field staff. Six were staff based at posts in the Nomrog Strictly Protected Area, and two were officers from the Khalkh gol Soum command post, which oversees the Nomrog posts. Four participants were rangers and volunteer rangers of the Ministry of Nature and Environment, with direct responsibility for Nomrog SPA. One participant was a Soum Ranger with direct responsibility for areas in Khalkh gol Soum. One participant was a GIS specialist from the Protected Areas Administration based in Choibalson. Seven Mongolia and foreign experts participated as instructors and training assistants (Annex 2).

#### Part 1. Introduction

## Module 1. Conservation philosophy

**Duration**: 1 hr

**Presenter:** Dr Antony Lynam

**Content:** Different groups of people hold different and sometimes opposing or contradictory values for wildlife and wilderness. These values are discussed, compared and contrasted with values of wildlife protection staff. Wildlife has been threatened by extinctions in the past and is currently threatened by a wave of extinction caused by human development. In Mongolia, this has led to the extinctions of some species, and the endangerment of many others.

#### **Competency achieved:**

- 1. Understand that wildlife may be valued for economic, ecological, conservation, moral or ethical reasons.
- 2. Understand that Mongolia's wildlife includes many species that are threatened with global extinction.

Training aids: PowerPoint presentation

#### **Summary points:**

- 1. As was discovered in the last training, some participants reported they appreciated wildlife for its beauty and desired to have wildlife for future generations. If field staffs appreciate nature for its existence value, this provides a foundation for its conservation.
- 2. Wildlife documentaries including *Plant Earth* and *Tigers Fighting Back* were shown during evening sessions to help develop an awareness of wildlife conservation issues in other Asian countries.
- 3. Border guards live with their families inside the reserve and are the only year-round residents. To increase awareness about wildlife in the local community and encourage its conservation, wildlife videos were shown at a border post in the buffer zone after the conclusion of the training.

### Module 2: Protected areas and conservation in Mongolia.

**Duration**: 1 hr

**Presenter:** Sukhtulga Tserennadmid

**Content:** In this session rangers learnt about the different kinds of protected areas, and the reasons why a protected area system was established in Mongolia. Protected areas help preserve biodiversity, endangered species and their habitats.

#### **Competency achieved:**

1. Understand the broad problems facing biodiversity and species conservation in Mongolia.

2. Understand why protected areas are needed for biodiversity conservation by learning examples of how species have been saved through protected area management programs in Mongolia e.g. Tahki.

Training aids: PowerPoint presentation

#### **Summary points:**

- 1. This opening presentation was given by a former protected area manager so had particular relevance to Nomrog and the participants in this workshop.
- 2. The presenter motivated participants to be interested in this workshop by citing examples of his work from Hustai Nuur reserve.

# Module 3: Responsibilities of government enforcement staff in protected areas.

**Duration**: 0.5 hrs

**Presenter:** Dr Antony Lynam

**Content:** In this session we define who is responsible for the enforcement of laws pertaining to environmental protection, roles & responsibilities these staff hold, and the purpose of the training workshop.

#### **Competency achieved:**

- 1. Understand the role played by various government staff in wildlife protection
- 2. Understand that interagency collaboration and communication is needed to make conservation effective.

**Training aids:** None, oral presentation.

#### **Summary points:**

1. Good wildlife protection officers are individuals who are outdoors people, nature protectors, upstanding citizens, and professionals. In their positions they serve multiple roles including those of policemen, data collectors, resource managers, representatives of the Mongolian Government, public relations officers and public safety officers. Thus wildlife protection officers are unusual individuals.

#### **Practical exercise:**

- 1. Lt. Col. Erdenbat arranged a field trip to the Hanchandmanul Border Post to observe the work of border guards. We met with a former workshop participant Sgt. Mungun O. who heads the post. He showed us completed patrol forms that detailed wildlife observations. Border guards have diligently used the forms left with them last year to record wildlife along their patrol routes. Some of the forms contain information about poaching.
- 2. Nomrog protected area staff presented Sgt. Mungun with a certificate thanking him and the border guards for assisting efforts to protect wildlife in Nomrog.

#### **Recommendations:**

- 1. The new Nomrog Protected Area administration has direct responsibility for Nomrog SPA but is understaffed and is yet to establish a permanent presence inside the reserve. When asked about field patrol activities, one lead ranger (Sukhbaatar) mentioned that the Protected Areas administration does not currently have the resources to conduct patrols and wildlife monitoring at Nomrog, and they depend on the border guards to perform this function.
- 2. Border guards have authority to administer and enforce environmental laws. WCS can further support their work.
- 3. A new Division for Combating Environmental Crimes has been established with the Mongolian Police force. I met with Lt. Col. Erdenebayar Magmadorj in Ulaanbaatar prior to the workshop. Local police may supplement the efforts of border guards and rangers through providing acting on information about wildlife trade and illegal activity in protected areas and soum centers. We invited local police to the training but they were unable to join us this time.
- 4. For future trainings, limit the participants to those that will be spending time in the park carrying out patrol activities.

#### **Suggested follow-up:**

- 1. Contact SBDA officials in Ulaanbaatar (Colonel Ts. Gansukh and Lt. Col. T. Erdenbat), Governor Myagmarsuren and the Nomrog chief, debrief them on the training, and provide copies of this final report from the training. A copy of the report might also be sent to Lt. Col. Erdenebayar Magmadorj, Chief of the Division for Combating Environmental Crimes.
- 2. WCS should follow-up with border defence agency staff and Nomrog rangers in Khalkh gol and Nomrog 2 3 months after this training to a) assess how equipment donated to the agencies is being used, b) assess how the agencies are cooperating in doing wildlife enforcement, and as explained in further detail below, c) monitor use of wildlife patrol forms which were distributed to participants at the training.
- 3. For assessing post-training progress, Captain O. Adiya or Sr Lt. Gantogs are the points of contact for SBDA and Sukhbaatar for Nomrog.

# Part II. Legislation and Law Enforcement

#### Module 4a: Summary of environmental laws pertaining to protected areas

**Duration:** 8 hrs

**Instructors:** Lt. Col. T. Erdenbat, Badam Khaidav, Tumurbaatar Tsagaan, and Dr Antony Lynam

**Content:** Understanding the environmental laws and legislation covering wildlife, plants and their habitats is a border guard/ ranger's responsibility. This section discussed aspects of the national legislation relevant to hunting, protected areas, fauna and plants. References to some of the provisions were provided to assist with a closer analysis of the laws.

#### **Competency achieved:**

1. Understand the range of laws that cover environmental protection within Mongolia.

- 2. Understand the content of laws on specially protected areas, fauna, plants and hunting, and related fine structures.
- 3. Understand the concept of CITES, an international wildlife treaty to which Mongolia is a signatory.

**Training aids:** Oral presentations, overheads and PowerPoint presentations (Law on Protected Areas and What is CITES?), Badam, Kh. (Ed.) (2006) Compilation of laws and legislation relating to animals and plants, Ulaanbaatar, State Specialized Inspection Agency of Mongolian Government, Department of Environment, Geodesy and Mapping.

#### **Summary points:**

- 1. Lt. Col. Erdenbat briefed participants on a number of agreements, regulations and articles of law whose enforcement is the responsibility of border guards. These are described in further detail in Annex 3;
  - a. The inter-government agreement to manage border problems and rules on the Mongolian-Chinese border
  - a. The inter-government agreement to cooperate and manage border problems and rules on the Mongolian-Russian border
  - b. Mongolian Government strategy for borders
  - c. Border Law
- 2. Mr Badam explained Mongolian Laws on Hunting, Fauna, Cites Implementation, Hunting Fees, Wildlife and Wildlife Exports and Imports, and Modified Biological Products. To aid in the comprehension these laws, a book containing a set of articles and regulations (Badam, 2006) was provided to participants. He explained how articles in these laws should be interpreted during implementation and patrolling activities. He also briefed participants on how to apply penalties for violations. The Law on Hunting will be revised soon.
- 3. Mr Badam explained International Conventions to which Mongolia is a signatory; Biological Diversity, Wetlands (RAMSAR), CITES, Migratory Species, Whale Management, and Bio safety. He detailed Mongolia's role in upholding the Conventions.
- 4. Mr Badam informed participants about the wildlife ecological and economic assessment of Mongolia approved in 2005 by the Government and its fees and permissions.
- 5. Mr Tumurbaatar gave an illustrated lecture on the Mongolian Law and policy on Special Protected Areas, and the role of rangers and border guards in their implementation.
- 6. Mr Tumurbaatar lectured on the Law on Natural Plants and conducted a field inspection (see *Enforcement Patrol Activities* below). Medicinal plants are being increasingly collected across the Eastern Steppes for export to China. The regulation of this harvest is possible by proper implementation of the Law on Plants.
- 7. Border guards and rangers play a role in helping Mongolia meet its commitments to the CITES convention. Antony Lynam gave an illustrated lecture on the CITES convention. This increased awareness of this important Agreement, and stimulated discussion between participants and law enforcement trainers. Mongolia's Laws do not provide protection to many CITES listed species.

#### **Recommendations:**

- 1. Include legal training in annual training schedules for border guards, rangers and state inspectors. Use this as an opportunity to update participants on changes to national environmental laws, some of which are currently in process.
- 2. When it is complete, the new bridge in the core zone will provide a convenient point for illegal cross-border trafficking of wildlife from Mongolia to China.

#### **Suggested follow-up:**

- 1. WCS should publish the Nomrog ranger manual in a general form so it can be used in other parks and border areas. Send out the Nomrog ranger manual for independent review and comment.
- 2. Ahead of the opening of the bridge, conduct a workshop to explain and clarify the responsibility of Mongolia border staff and customs in monitoring CITES restricted species at this border crossing.

#### Module 5. Enforcement patrol activities.

**Duration:** Two presentations totalling 4 hrs, a full-day inspection exercise and a half-day practice patrol exercise

Instructors: Ts. Tumurbaatar, Badam Khaidav, and Dr Antony Lynam

Content: Law enforcement is one of three primary responsibilities for environmental inspectors and rangers. In this section, practical techniques for enforcing national laws and international treaties were discussed. Appropriate techniques for identifying, documenting and reporting poaching and other illegal activity and applying law enforcement to offenders were presented. Because the reserve overlaps the Mongolia border zone, and hunting is prohibited in the strictly protected area, Border Patrol staff has a legal authority to assist with anti-poaching activities. Therefore, there is a legal basis for collaboration between the agencies.

#### **Competency achieved:**

- 1. Understand the scope of responsibilities of wildlife protection staff in protecting wildlife and wildlands at Nomrog SPA, and recognize that the roles of border guards, state inspectors and rangers overlap and should complement each other.
- 2. Know appropriate techniques for identifying, documenting and reporting illegal activity.
- 3. Know general principles for applying law enforcement in the reserve, including appropriate ways for treating local people and encouraging compliance with laws and regulations.

**Format and training aids:** Oral presentations, practical demonstrations, binoculars and spotting scopes, GPS, map and compass, practice field patrol exercise.

#### **Summary points:**

- 1. Border defence agency staff demonstrated they have some training in techniques for confronting and arresting poachers and other suspects.
- 2. Participants learnt first hand from Mr Tumurbaatar best practices for confronting violators and making safe inspections. State Specialized Inspection Agency has three kinds of inspections; planned, unplanned and law implementation inspections.

- 3. A practical exercise involved a planned inspection in the buffer zone where local people and Chinese nationals are harvesting a plant (*derevger jirgeruu*), which is used in traditional Chinese medicine.
- 4. The practical exercise fulfilled one of the suggested follow-up activities from the 2006 workshop i.e. include plant monitoring activities in any future ecological monitoring program at Nomrog SPA.
- 5. Information required from companies involved in the medicinal plant harvest includes
  - a. MNE permits
  - b. Company must have experience with harvest
  - c. Plant resources must be estimated before the harvest
  - d. Local authorities must issue permissions
  - e. An environmental impact assessment is needed
  - f. State Border Defence Agency permits are required if harvest is to be done in the border zone
  - g. Identifications of harvest personnel and foreign nationals must have immigration clearance
- **6.** Three plant harvest camps were visited during the inspection. Evidence of violations of the above requirements was seen in all places. Standard reporting procedure is to issue violation notices, official letters of obligation, and imposition of fines and penalties. Companies involved in the harvest were summoned to a meeting in the soum centre immediately following the training workshop.
- 7. A debriefing after the inspection focussed on several important questions;
  - a. How can planned inspections be better organized?
  - b. Which kind of penalty are needed in this situation according to law?
  - c. What kinds of measures are needed to stop this activity? How can governmental organizations and officials implement them?

#### **Recommendations:**

- 1. Border guards will be primarily responsible for wildlife patrols due to their year-round presence inside Nomrog SPA. Future investment in supporting wildlife protection activities in the SPA must focus on improving the efficiency of patrols done by border guards to maximize detections of wildlife crime.
- 2. All wildlife protection staff should follow standard inspection procedures outlined in the class. Joint inspections and patrolling by border guards and inspectors/ rangers is very important. Accordingly there is a special order on joint cooperation between police, security agencies and the Mongolian Court.
- 3. For the next training workshop, increase the practical field patrol component of the training. This will require a dedicated and adequate amount of time in the field with the proper equipment.
- 4. Conduct follow-up practical patrol training with participants who have taken the original course or those that are identified to be spending time in the field.
- 5. Practical exercises could be developed to simulate poaching events by incorporating a team of dedicated 'system testers' that the patrol teams are required to find.
- 6. More time needs to be spent working with the patrol forms in going over situations likely to be accounted in the field.
- 7. Border guards reported many wildlife observations in their patrol reports. A list of species of special interest should be produced for Nomrog and communicated to the trainees so that a resource map can be quickly built from the patrol reports.
- 8. It should be a high priority to collect and collate any completed patrol forms and then present these on maps to the trainees as soon as possible. Field officers respond very

- well to seeing their patrols mapped out and these officers will be no exception considering how quickly they adopted the patrol reporting processes and understood the reason for doing such reporting.
- 9. A GIS module with practical applications to the patrol forms should be developed using a computer with ArcView capabilities and the appropriate shape files.
- 10. It appears that these officers had almost no resources for extended patrols (camping equipment, ration packs etc). These should be supplied otherwise the required coverage of a large remote reserve like Nomrog cannot be achieved.
- 11. There must be greater and more regular communication and cooperation between the 3 agencies. The participants in their general discussions raised this as an important issue.

#### Immediate follow-up (6 - 12 months):

- 1. Arrange wildlife patrol exercises in the spring and summer of 2008. Use these exercises to accompany officers on a few patrols and conduct additional training in field craft and techniques for detecting and documenting wildlife crime. Encourage park rangers and inspectors to join these exercises but the focus should be on resident enforcement staff inside the Nomrog core zone (currently border guards).
- 2. As was noticed last year the trainees quickly understood the patrol reporting process and its overall purpose. They have been left with 200 blank patrolling reports and encouraged to use them.
- 3. Captain O. Adiya has agreed to coordinate the distribution of patrol forms to zustavs and their collection when filled in and submitted by border guard patrol teams. There should be a visit with Captain Adiya by a WCS representative to monitor that the forms are being used. This will show that there is great outside interest in the program. Additionally a database might be established to log information from the forms onto computer. The data would not be taken away; it would be left with the border guards for their own use in monitoring wildlife crime.

#### **Medium-term follow-up (12 – 24 months):**

- 4. WCS should encourage the Nomrog SPA administration to allocate a budget for sending rangers to be permanently based in the protected area.
- 5. If Nomrog SPA commits rangers to full-time field duty in the SPA, WCS should propose a mobile Wildlife Enforcement Team comprising border guards, state inspectors and rangers. The team would use an existing vehicle for transport and be provided with gasoline and resources for conducting remote field work such as sleeping equipment, tents, cooking equipment, and 2-way radios in addition to the equipment already supplied through this training (spotting scopes, binoculars, GPS, maps, compass and patrol forms).

#### Part III. Field craft

#### Module 10: Using compass and map for navigation and orientation

**Duration:** 8 hrs of classroom instruction plus individual practice outside the classroom, and field practice during the practice patrol exercise.

**Presenter:** Antony Lynam and N. Odonchimeg

Content: Rangers usually use well-defined trails or local knowledge to conduct route marches and enforcement exercises. However, the most effective patrolling is done over wider areas within a reserve, and often involves venturing 'off the beaten track' into unknown or little known areas. In this section participants became familiar with standard topographic maps, and learn to identify parts of maps, read contours and interpret landforms/drainages, understand map scale, mark locations and distances, determine directions and best routes of travel, and use compass and maps for navigation.

#### **Competency achieved:**

- 1. Recognize a topographic map, its level of reliability, and the various pieces of information contained.
- 2. Correctly interpret landforms and terrain from inspection of contours.
- 3. Accurately measure area and distances on maps.
- 4. Accurately report locations of objects on maps in latitude/longitude format. Be able to plot a latitude/longitude location onto a map.
- 5. Orient a map and correctly determine directions and routes of travel in the field.

**Format and training aids:** Topographic maps (1:100,000 and 1:200,000), landform diagrams, Silva compass, steel ruler, lengths of string.

#### **Summary points:**

- 1. This module introduced many concepts that were familiar to the participants but previous training may not have been comprehensive. One full-set of 1:100,000 series topographic maps and one set of the 1:200,000 maps were distributed to border guards and Nomrog SPA staff at the conclusion of the training.
- 2. Participants learnt how to use map scale to measure horizontal distances on maps. Straight-line distances can be estimated directly by using rulers or counting grid squares. True distance can be estimated by placing pieces of string over intended routes on the map or using measuring wheels. Practice was made in choosing various paths between points on a map; direct routes (shortest) vs. best routes (crossing fewest contours) vs. patrol routes (including visits to high vantage points where observations can be made). Metric area overlays were used as a teaching tool for accurate estimation of areas on maps.
- 3. Tests of general knowledge of maps before and after training indicated an average level of improvement of 27% with an acceptable level of achievement (average score in the final test of 71%).
- 4. Compasses are rarely used by border guards and rangers but use of compass is critical for some kinds of work e.g. walking transects or demarcating a boundary line. Each participant was issued a Silva compass for use in the training and these were left with the participants at the conclusion of the training. Correct technique for use of compass for indicating direction, orienting a map, and measuring bearings was taught. Participants quickly caught on to this. Also taught was how to factor magnetic deviation into bearings when going from map to compass, and compass to map. Deviation between grid north and magnetic north is approximately 9 degrees West. Rangers practiced taking bearings on hilltops and plotting on maps as well as walking a bearing for a predetermined distance.
- 5. Knowing one's location in the field is critical when documenting poaching and other illegal activity. The concept of latitude and longitude for reporting locations was taught. Practice was made in estimating latitude and longitude of points from topographic maps.

6. Tests of general knowledge of compass before and after training indicated an average level of improvement of 110% with an acceptable level of achievement (average score in the final test of 63%).

#### **Recommendations:**

- 1. Participants may remember how to interpret steep versus gentle slopes, measure distances and bearings but may have trouble remembering how to plot locations. Practice using the topo maps is encouraged. Some participants will quickly forget the concepts so refresher training will be needed.
- 2. Rangers should take topo maps with them on all patrols and survey work, and try to use them to interpret local terrain. Use of GPS in tandem with maps and compass will help in finding and plotting locations and bearings. The training manual should serve as a useful reference for map and compass.

#### **Suggested follow-up:**

- 1. Refresher training in map and compass should be repeated in spring of 2008.
- 2. Map sketching was not taught in this training due to lack of time but should be taught in follow-up trainings. This skill will be useful for documenting crime scenes and locations of wildlife observations.

# Module 11. Introduction to Global Positioning System (GPS) for georeferencing locations and for navigation and orientation

**Duration:** 4 hours of classroom and practical instruction plus individual practice outside the classroom, and field practice during the practice patrol exercise.

**Presenter:** Antony Lynam and Kirk Olson.

**Content:** Accurate reporting of live and dead wildlife observations and illegal activity requires the use of Global Positioning System (GPS) devices. None of the participants had previously used GPS so this was new information. This module taught principles of the GPS system, basic functions and operations for the GARMIN Foretrex 101, marking waypoints, tracks, reporting location in the field using latitude and longitude, and measuring distances and bearings.

#### **Competency achieved:**

- 1. Turn a GPS on and off and know how to replace batteries and conduct basic care and maintenance.
- 2. Know how to obtain a position fix in the field, and the limitations imposed by different types of terrain.
- 3. Record positions as waypoints and be able to plot the points on a topographic map.

**Format and training aids:** Oral presentation; Garmin Foretrex 101, AAA batteries, compass, topographic maps, steel ruler (10cm).

#### **Summary points:**

1. Five Garmin Foretrex 101 GPS units were available for the class (3 issued to border guards last year, one new one issued to the Nomrog ranger, and my own personal GPS), with groups of three – four participants. The GPS units can be worn like a wristwatch, so are suitable for field staff that patrol on horseback or motorcycle.

- 2. Some border guards were already fluent with the GPS before the training because their colleagues, who attended training last year, had taught them the basic functions.
- 3. After a classroom session about principles of GPS, we took participants outside the classroom to work with GPS. Despite the lack of Mongolian language interface, participants quickly learnt the GPS and its basic functions; turning the machine on, receiving a location, and recording a waypoint.
- 4. The discussion of latitude and longitude from module 10 was a primer for the presentation of first steps in GPS. The participants were able to see how the GPS recorded location in latitude and longitude, and they knew where the numbers came from. A practical exercise had participants creating a waypoint and entering a location, then navigating to the location using the GOTO function.
- 5. Participants learnt how the GPS creates a track log and discovered how to measure distance travelled along a patrol route using this function.
- 6. Participants noted how using GPS they were able to precisely record a location in the field, and that the ability to pinpoint their location would greatly help them in recording observations.

#### **Recommendations:**

- 1. The project has supplied three GPS units to border posts in Nomrog SPA, 1 to the SBDA Khalkh gol post, one to the Nomrog SPA ranger and one to the State Inspection Service. All the units appear to be in service at the field posts. I donated my own GPS to the border guards so they now have four units. Participants should practice using the GPS and the consult the training manual where needed to refresh their memories.
- 2. Recording accurate location data will be necessary for documenting illegal activity via patrol forms so all staff working in Nomrog SPA will need to gain competency with GPS.

#### **Suggested follow-up:**

1. Refresher training should be done during a follow-up visit in the spring of 2008.

#### Part IV. Natural resources assessment

Modules 4b and 13. Protected status of wildlife in Nomrog SPA/Recognizing wildlife, their tracks and signs.

**Duration**: 4 hrs, including 1 hr lecture and 3 hr field exercise

**Instructors:** Kirk Olson and Antony Lynam

#### **Content:**

- 1. Wildlife protection staff should be familiar with the protected species of animals in their area. This module introduced some of the vertebrates that are protected by Mongolia and international laws. The reasons why these are important species was discussed. These species should be targets for protection and monitoring in the Nomrog SPA.
- 2. Often tracks and sign observed while in the field are as close as one will get to the animals that created them. Being able to identify these signs and to distinguish

between individuals will aid in assessing the species and its abundance in a particular area during a given time. The ability to distinguish fresh sign from old sign will allow the observer to assess habitat use by wildlife and to assess whether the region is likely to be a place that poachers may visit. Also, understanding what one records and what details are important to identification of wildlife through tracks and sign and key physical features enable the observer to move through his/her area with greater sense of knowledge and understanding of the habitat. This skill sharpens the observer's senses and allows one to carry out the job of wildlife enforcement at a higher level of professionalism.

#### **Competency achieved:**

- 1. Know the species of birds, mammals, reptiles and amphibians protected by Mongolia law.
- 2. Know how to identify key species from field guides.
- 3. Know how to recognize key species from their tracks and signs.

**Training aids:** PowerPoint presentation; lists of key species, mammal track guides, bird field guides

**Training aids:** PowerPoint presentation; lists of Mongolia protected species from the Mongolian Red Book, national laws and IUCN Red Data lists.

#### **Summary points:**

- 1. The module was taught by summarizing information obtained from the Internet and published literature, using field manuals for examples. A test to assess general knowledge of Mongolian vertebrates was generally well done (class average = 70%, range: 55 83%) indicating participants were already familiar with the wildlife in Nomrog.
- 2. A practical field exercise was conducted where participants recorded observations of tracks and sign and identified wildlife. Numerous birds were recorded as well as tracks of moose, roe deer, Manchurian zokor. Scat of moose and grouse were observed. The module was received with great interest and provided a good opportunity for interaction during the module lecture and enthusiasm for wildlife and habitat identification.

#### **Recommendations:**

- 1. Field manuals of all vertebrates should be provided to the participants. Taxonomic descriptions in Mongolian would also be useful. Birds of Mongolia is being produced, Mammals could be lifted from Mammals of Europe or other pubs. Mongolian fish ID lists are also being produced.
- 2. We did not have time to teach sketch techniques. This should be a part of future trainings.
- 3. More in-depth instruction in track and sign and basic survey techniques should be done in a separate training.

#### **Suggested follow-up:**

- 1. WCS to provide field manuals protected species to border guards/ park rangers.
- 2. A dedicated short-course on wildlife recognition and basic survey methods should be considered. This would involve field staff that will be responsible for documenting wildlife and wildlife crime via patrol reports. Allocate at least two thirds of the time to field instruction e.g. using track stations, photographs and plaster cast models of

representative tracks. Invite Mongolian specialists to teach modules on identifying reptiles and birds.

#### Other recommendations

- 1. Participants need to be informed of the field conditions expected and given a list of things they are responsible for providing for extended field trips- appropriate sleeping equipment, field clothing. If participants respond that they do not have the necessary equipment, the training program should then have these available for use but only after there is a confirmed need for it. This eliminates having participants showing up in tracksuits and black dress loafers expecting to go out on an extended field trip. Aside from the people from UB and some exceptions from Choibalsan-everyone in Mongolia is prepared to and does spend 4 months of the year, every year in below freezing conditions.
- 2. For the next training workshop, the representative from the State Border Defence Agency needs to be identified as early as possible in the preparation and to brief him on the contribution of past representatives, and the scope and objectives of the training, so he can make adequate preparations for his presentations and inputs.
- 3. All modules should be videotaped for future reference.
- 4. Include a module that uses examples from around the world on how the start to finish process works on cases of wildlife law violations. Examples could range from how an elephant poaching ring is busted, tiger trafficking network is infiltrated, the fish hatchery example, poaching of deer cases, illegal fishing, garbage dumping etc.
- 5. A spring visit could be divided between two posts (or all three) with travel days between posts being part of the field craft exercises.
- 6. Sr. Lt. Gantogs (Chief of Staffs, SBDA Sumber) and Captain O. Adiya (Special Agent, SBDA Sumber) showed special motivation and aptitude for this course, and should become points of contact for future work at Nomrog involving WCS. They should also be asked to join the next training workshop as assistant instructors.

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Annex 1. Training participants.

№	Photograph	Name	Position	Organization	Place
1		P. Altantsetseg	Soum Ranger	Khalkh Gol Soum Government	Khalkh Gol
2		D. Davaakhuu	Volunteer Ranger, Nomrog SPA	Nomrog Strictly Protected Area Administration	Khalkh Gol
3		I. Amanjol	Volunteer Ranger, Nomrog SPA	Nomrog Strictly Protected Area Administration	Khalkh Gol
4		Ts. Sukhbaatar	PA Ranger, Nomrog SPA	Nomrog Strictly Protected Area Administration	Khalkh Gol

5		T. Chuluunbaatar	PA Ranger, Dornod Mongol SPA	Eastern Mongolia Strictly Protected Area Administration	Matad
6		N. Gangerel	GIS Specialist, Nomrog SPA	Nomrog Strictly Protected Area Administration	Choibalsan
7		Captain O. Adiya	Special Agent	State Border Defence Agency	Sumber Otryad
8	MAIGOL	Lt. B. Ganzorig	Deputy Commander, Border Post Training	State Border Defence Agency	Nomrog Border Post

9	Sgt. E. Batkhuu	Border Guard, Driver	State Border Defence Agency	Nomrog Border Post
10	Captain A. Sukhbayar	Immigration Specialist	State Border Defence Agency	Sumber Otryad
11	Lt. S. Nasanbaatar	Commander, Nomrog Border Post	State Border Defence Agency	Nomrog Border Post
12	Sgt. P. Tumurbagana	Communications Specialist	State Border Defence Agency	Degee Gol Border Post

13	Sgt. B. Zorigtkhuu	Border Guard	State Border Defence Agency	Xar Khont Border Post
14	Lt. M. Enkhbileg	Border Guard	State Border Defence Agency	Nomrog Border Post
15	B. Tsogbadrakh	Ecology Student	National University of Mongolia	Ulaanbaatar

Annex 2. Instructors and training assistants

№	Photograph	Name	Position	Organization	Place
1		Lt. Col. T. Erdenbat	Senior Specialist	State Border Defence Agency	Ulaanbaatar
2		Ts. Tumurbaatar	Senior Inspector	State Specialized Inspection Agency	Ulaanbaatar
3		Kh. Badam	Senior Inspector	State Specialized Inspection Agency	Ulaanbaatar
4		Antony Lynam	Wildlife Specialist	WCS – Asia Programs	Thailand

5		Ts. Sukhtulga	Translator/trainer	Green Gold Pasture Management Project	Ulaanbaatar
6		K. Olson	Wildlife Specialist	WCS – Mongolia Program	Ulaanbaatar
7	Water Control of the	N. Odonchimeg	Training Coordinator	WCS – Mongolia Program	Ulaanbaatar

# Annex 3. Agreements, regulations and articles of law whose enforcement is the responsibility of border guards.

The inter-government agreement to manage border problems and rules on Mongolian-Chinese border.

# Article IV: To manage border problems, protect wildlife, conduct hunting and commercial activity.

- 10.1 Both countries' citizens can catch fish only in their territory, but not on the border line and the following activities are not allowed:
- a. To catch fish using dynamite, drugs and other method which impact the fish community and/ or destroy fish reserves.
- b. To build up any blocks or dams which disturb fish and aquatic animal migration and movement.
- 10.2 If necessary both sides should discuss establishment of a reservation pond for fish and aquatic animals and make hunting bans for some species.
- 11.1 Each side is not allowed to hunt within 1000 m of each side of the border.
- 11.2. Both sides have the responsibility to prevent hunting and disturbance of any animals.
- 11.3 Both sides can conduct audits to establish a protected area along the border to keep endangered species such as, Wild ass, Przewalskii horse (Takhi), Argali, Ibex, Saiga, Wild camel, Gobi bear, Beaver, Muskrat and so on.

# The inter-government agreement to cooperate and manage border problems and rules on the Mongolia-Russian border

#### Article III: Conduct of wildlife conservation, mining, agriculture and fishing

- 17.1 Both countries' citizen can catch fish only in their territory, but not on the border line and the following activities are not allowed:
- a. To catch fish using dynamite, drugs and other method which impact the fish community and/ or destroy fish reserves.
- b. To catch fish at night (from sun set to sun rise)
- 17.2 Both sides can discuss the establishment of a reservation pond and make hunting bans in the special agreement.
- 18.1 Both sides enforce their current hunting law in each territory and be in charge of preventing chasing of animals cross the border and restrict shooting towards the border.
- 18.2 Both sides headquarters should discuss wildlife conservation and hunting bans when necessary. Can catch fish only in their territory, but not on the border line and the following activities are not allowed:
- a. To catch fish using dynamite, drugs and other method which impact the fish community and/ or destroy fish reserves.

- b. To build up any blocks or dams which disturb fish and aquatic animal migration and movement.
- 18.3 If necessary both sides can take measurement to establish partial and complete protected area in some part of the border.

# Additionally, border guards are responsible for enforcement of other national laws in the border zone.

#### **Mongolian Protected Area Law**

5.4 The representative, supervisor and assistants of the border guard can have rights like the state inspector if the government administration gives permission to protect protected areas. The border guard staff can have the same rights as the inspector only within the border zone.

#### Mongolian Law of Conservation nature and Wildlife

Inspection staffs, such as border, customs and veterinarians can be given state inspector's rights and duties.

#### NOTE:

- 1. Border Guards can be volunteer state inspectors but in practice this has never happened because local officials and the state inspection agency do not agree with the law.
- 2. A previous agreement between the Ministry of Nature and Environment and SBDA to have border guard help enforce environmental laws failed because salary supplements to post commanders stopped being paid. MNE do not acknowledge border guards as environmental law enforcement staff.
- 3. The Law on Borders specifies that border guards have a responsibility to secure wildlife populations in the border zone. Eighty percent of Nomrog SPA falls within the border zone.
- 4. According to Lt. Col. Erdenbat and Mr Badam Khaidav, enforcement of environmental laws should be more effective if agencies collaborate, so there is a great need to restore levels of cooperation that existed in the past.

#### Annex 4. Participant evaluation

1. Do you have an understanding of the following terms?

Navigation	yes	no	
Track and Sign	yes	no	
Wildlife Conservation	yes	no	
Law Enforcement	yes	no	(100%)

- 2. Has your understanding of the conservation status and threats to Nomrog wildlife increased? Please write down the degree of your increased knowledge. (1 is no increase, to 5, greatly increased.)
  - 1. no new knowledge
  - 2. know a little more than before workshop
  - 3. learned a fair amount of new information
  - 4. learned a lot
  - 5. learned a great deal and believe I can apply this knowledge (98%)
- 3. Has your understanding of navigation concepts increased? Please circle the degree of your increased knowledge. (1 is no increase, to 5, greatly increased.)
  - 1. no new knowledge
  - 2. know a little more than before workshop
  - 3. learned a fair amount of new information
  - 4. learned a lot
  - 5. learned a great deal and believe I can apply navigation techniques ( 95% )
- 4. Has your appreciation of the importance of law enforcement monitoring increased? Please circle the degree of your increased knowledge. (1 is no increase, to 5, greatly increased.)
  - 1. no new knowledge
  - 2. know a little more than before workshop
  - 3. learned a fair amount of new information (40%)
  - 4. learned a lot (50%)
  - 5. learned a great deal and believe I can apply law enforcement monitoring ( 10%)
- 5. Navigation techniques are most useful for the following aspects of my work:

#### Most (99%) of people note that;

- 1. Good knowledge to determine location by compass and GPS especially in bad weather condition.
- 2. Now they can to determine location of cases obtained from informants.
- 3. Easy to develop patrol plan and choose route. Because now we have knowledge to work on the map.
- 4. We will not get lost during patrolling especially in bad weather such as snow storm etc.

6. The manual for the workshop is a useful tool. Please circle the number, which you believe most accurate.

1 2 3 4 5 (not useful) (somewhat useful) (useful) (very useful) (extremely useful) (98%)

7. Please list on your paper all, which might apply to the Instructors.

The Instructors:

- •Were knowledgeable
- •Were easily understood
- •Answered questions
- •Listened well
- •Provided useful examples
- •Translations were effective
- Allowed for participant interaction
- •Adapted content to our needs/situation
- Presented something useful/valuable (100%)

One participant note that the Tony's presentation in English was very clear, so he has some understanding directly from English. It was for him happy.

Please write responses to the following prompts:

- 8. The most useful part of the workshop was:
- Field practice
- Work with compass and GPS
- Map and Mapping
- Wildlife threats
- Joint patrolling
- Combination of lesson and field practice
- NGOs like WCS helping to Governmental organizations to enforcement laws related to wildlife conservation in Numrug.SPA.
- Increased knowledge of wildlife conservation and patriotism.
  - 9. The least useful part of the workshop was:

#### All of training was very valuable for us.

Please add any additional thoughts or comments you would like to make about the workshop (use the back of you paper for additional space).

**Every participant wrote that;** 

- 1. Thank you very much for all trainers
- 2. Please, conduct again this training and involve more participants and more information, experience and case. (about disturbed nature and its current condition to human life)
- 3. If possible insert some specific English teaching (related to wildlife and nature conservation and border guards) in next training schedule.

#### Annex 4. Photographs from the training workshop



Classroom-based training was done at the State Border Defence Agency's Nomrog Zustav.



Mr Kh. Badam, a senior State Inspector, provided instruction on Laws on Fauna, Hunting, CITES Implementation, Hunting Fees, Wildlife and Wildlife Exports and Imports, and Modified Biological Products.



Mr Ts. Tumurbaatar provided classroombased instruction on the Laws on Plants and Special Protected Areas, and led a field inspection exercise in the buffer zone.



Participants learnt techniques for navigation, including use of Global Positioning System devices.



Medicinal plant harvesters are interviewed by Mr. Tumurbaatar. Participants learnt standard Mongolian procedures for planning, executing and reporting environmental inspections.



Role-play was used to demonstrate approaches for dealing with wildlife and fishing violations in the Strictly Protected Area.



A horseback patrol in the core zone, prime habitat for moose and red deer. Rangers, state inspectors and border guards spent time working together on practical exercises and shared experiences in the process.



Participants visited a remote border post to meet border guards who have conducted wildlife patrols in the core zone during 2006 - 7.



A park ranger awards a border guard with a certificate of appreciation for his assistance in monitoring threats to wildlife.



Border guards complete a patrol report after documenting a hunter's camp on a field patrol.



Border guards download digital photographs onto a computer after a field patrol.



Lt. Col Erdenbat checks a list of equipment donated to the State Border Defence Agency for use in wildlife enforcement.