OPTIONS FOR LAND REGISTRATION AND SURVEY SYSTEMS ON ABORIGINAL LANDS IN CANADA

A Report Prepared for Legal Surveys Division of Geomatics Canada

by

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Options for Land Registration and Survey Systems on Aboriginal Lands in Canada

Executive Summary

Background

This study was commissioned by Legal Surveys Division (LSD), Geomatics Canada, Earth Sciences Sector, Natural Resources Canada.

The last thirty years have seen a remarkable change in the relationship between aboriginal and non aboriginal peoples in Canada. That change has been reflected by changes in policies and practices relating to aboriginal peoples by all levels of government. Many of those changes have resulted in aboriginal peoples assuming more control over their own governance. The result is that many aboriginal groups now find themselves with the power to create governance structures that relate to their cultural, environmental and economic situation.

A fundamental component of the governance structures is a land tenure system. A land tenure system consists of several components including a land registration system and a survey system. A land registration system is designed to provide a means whereby owners of rights in land may have those rights identified, recognized by the governing authority and recorded in some suitable form. A survey system is a set of principles, procedures and standards that are used in the production of cadastral (or legal) surveys to define the physical extent and location of rights and interests to land.

LSD recognizes that its client base is changing. This study was commissioned with the goal of providing support and information to aboriginal groups and land managers that are or will be faced with recommending land registration and survey systems for their land bases.

This study was divided into four components:

- A review of existing land tenure, land registration and survey systems on aboriginal lands in Canada was undertaken. That review identified existing and proposed systems.
- Structured international land reform projects were examined with a view to identifying the reasons for the success or failure of individual projects and the lessons that could be extracted and applied to the situation facing aboriginal peoples in Canada.
- A range of structured and unstructured interviews was undertaken with aboriginal land managers. These interviews were designed to more clearly identify the challenges faced by

aboriginal groups in land tenure issues.

- Finally, a range of options for land registration and survey systems for aboriginal lands in Canada was described and the advantages and disadvantages of each were examined.

Since the primary purpose of the study was to identify a range of options for land registration and survey systems from which an aboriginal group might choose, no specific land registration or survey systems were recommended.

Review of Existing Models of Land Registration and Survey Systems

The baseline model for the land registration system on aboriginal land in Canada is the Indian Land Registry created under the *Indian Act*. The baseline model for the survey system on aboriginal land is the Canada Lands Survey System created under the *Canada Lands Surveys Act*.

A number of alternative models have been developed, adopted or proposed by government and/or aboriginal groups. The following table summarizes the situation.

Land Registration Systems	Survey Systems
Unique land registration systems have been developed for the Cree/Naskapi lands under the James Bay and Northeastern Quebec Agreements and for the Alberta Metis Settlement lands. The provincial or territorial land registration system has been adopted or partially adopted or is proposed to be adopted under a number of structures including the Yukon Umbrella Agreement, the Inuvialuit Settlement, the Dene/Metis and Gwich'in Agreements, the Nisga'a Agreement, the Dogrib Agreement, the Sechelt Agreement and the Labrador Inuit Agreement. A new land registration system may be developed by Indian and Northern Affairs Canada in conjunction with First Nations under the *First Nations Land Management Act*.	A unique survey system has been developed for Cree/Naskapi lands under the James Bay and Northeastern Quebec Agreements. The provincial survey system which exists in the surrounding lands has been adopted under the Alberta Metis Settlements legislation and is proposed to be adopted under the Labrador Inuit Agreement.

International Research

A number of land reform initiatives have been undertaken in recent years around the world. Although there may be no direct parallels to the situation facing aboriginal peoples in Canada, these international cases may be considered with a view to determining what factors may be found in successful land reform projects and what factors tend to diminish the chances for success.

The following points have been drawn from the research:

- Land registration and survey systems must be able to incorporate informal, traditional or customary systems of land tenure.
- Land registration and survey systems should include methods for arbitrating and resolving land disputes. These dispute resolution systems must be culturally appropriate.
- Survey systems should be designed to allow occupiers to know the extent of their rights and to allow land administrators to keep inventories of the land.
- Survey systems should rely on visible, physical features to mark boundaries. These features may be natural (such as a watercourse), built (such as fences or ditches) or survey monuments.

Interviews with Aboriginal Land Managers

The aboriginal land managers interviewed represented a wide range of First Nations with differing attitudes toward land and development. Not surprisingly therefore, a wide range of responses was noted.

- Land disputes - a majority of groups reported that land disputes (both title and boundary) were common. The reasons for the disputes varied widely. Many disputes were settled by internal methods, but in some cases, outside assistance was called in.
- Degree of local responsibility for land administration - all First Nations expressed the desire to retain control of the land registration process and their own documents.
- Intention and capacity to perform certain surveying functions - many First Nations have internal survey capacity at the technician level. Many have developed working relationships with individual Canada Lands Surveyors which allows them to use their internal capacity to its fullest. All would like to develop this capacity further.
- Perceptions of and relationships with LSD and the Indian Lands Registry - First Nations reported a good working relationship with LSD, although they expressed serious concerns with delays in obtaining surveys. The views on the Indian Lands Registry were mixed. Some First Nations expressed satisfaction with the level of security afforded by the system. Others felt that the system was out of date and did not meet First Nations needs.

Options for Land Registration and Survey Systems

General Comments

A land registration and a survey system are components of a land tenure system. It is therefore imperative that they reflect and support the land tenure system in a jurisdiction. To impose European concepts of land registration and survey on traditional aboriginal land tenure systems would be a serious mistake. Since traditional aboriginal land tenure systems were communal in nature, it might be argued that land registration and survey systems are not needed at all. Indeed, if an aboriginal group decided to adopt such a communal land tenure system, this report would support that argument. Many aboriginal groups appear to be moving toward a model where at least some of their land base will be developed in support of increased economic activity such as resource development. Aboriginal groups may wish to consider the possibility of applying a limited land registration and survey system or none at all on some portions of their land base and more rigorous systems where economic activity demands it.

The development and operation of land registration and survey systems require significant investment of human and financial resources. It may be argued that the best system for a particular aboriginal group would reflect the unique culture of that group. The benefits of an exact match to cultural needs must be balanced against the cost of development and operation of such a system. A more generic system may not exactly reflect cultural values, but may be much less costly to develop and operate, especially if the costs can be shared by a number of groups. In a similar light, the adoption of a unique system may pose some impediment to economic development in that parties interested in development opportunities would be forced to expend significant time and effort in learning a unique system.

Land Registration Systems

Land registration systems may be private conveyancing systems, registration of deeds systems or registration of title systems. Private conveyancing systems are not rigorous in the sense that there is no method to determine with absolute certainty who owns what rights in a parcel of land. Registration of deeds systems allow the owners of rights to land to register documents supporting their claim and provide that registered documents have priority over unregistered ones. A search of the records may be used to determine with certainty who owns what rights in a parcel. Under a registration of title system, government maintains records of who owns what rights in a parcel and will provide a guaranteed statement of ownership on request. This guarantee is often (but not always) backed by an insurance fund.

This report used several criteria for assessing models for land registration systems. Those criteria were divided into essential and desirable categories as follows:

Essential criteria:

- Must be able to effectively answer the question "who owns what rights in this land."
- Must be flexible enough to support the land tenure system in the jurisdiction.
- Must contain a mechanism for resolving disputes.
- Must support the identification of overriding interests, that is, interests which may affect land but need not be registered.

Desired criteria:

- Should screen for ineligible interests. Many aboriginal land tenure systems will not allow non group members to acquire interests in aboriginal land. Documents which purport to convey interests to non eligible persons should be screened from the system.
- Should be simple to use and operate, consistent with maintaining the integrity of the system.
- Should be inexpensive to operate, consistent with maintaining the integrity of the system.
- Should be easily accessible.
- Should be capable of integration with a wider land information system.

The Models

The following models of land registration system were identified and reviewed:

- The Indian Land Registry or an improved version of it.
- The model created under the James Bay and Northeastern Quebec Agreements for Cree/Naskapi lands.
- The model created under the Metis Settlements legislation in Alberta.
- A model where the provincial or territorial land registration system applicable to the lands surrounding the aboriginal lands in question would be adopted.
- A generic land registration system into which aboriginal groups could opt. The federal government would develop an "off the shelf" land registration system which could be adapted and adopted by individual aboriginal groups.
- Internal (private conveyancing) systems developed by aboriginal groups where more rigorous systems are not required.

Survey Systems

A number of characteristics of survey systems were reviewed. These were:

- Numerical v. graphical systems - under a numerical survey system, a surveyor places monuments in the ground to delineate a parcel and accurate measurements of the locations of those monuments are taken. Under a graphical survey system, the state prepares large scale

topographic mapping and the registrar uses those maps to prepare index maps, which then define the parcel. This report takes the position that a survey system can and should be designed to be able to generate either numerical or graphical surveys, depending on the circumstances.

- Boundary demarcation - if a field survey is undertaken, some survey systems allow the placing of monuments be postponed or eliminated altogether. This report takes the position that all parcels should be monumented in some fashion, be it traditional survey monuments, or some other physical feature such as a fence or tree line.
- Integration of surveys - many survey systems encourage or require that individual surveys are referenced to some framework such as a coordinate system. This allows the integration of all individual surveys into a larger overall system.
- Standards - all survey systems will have standards that determine to what level of quality surveys must be conducted. It is the position of this report that carefully crafted standards are essential if a survey system is to be flexible enough to match the quality of the survey to the need. A survey system should also have some mechanism in place to ensure that the surveyors using the system are meeting the standards.
- Training and certification of personnel - a survey system must provide some mechanism for evaluating the skills and education of persons who wish to practise within the system.
- Survey records - the records that survey practitioners produce as they conduct surveys are an invaluable resource. Some mechanism must be in place to ensure that these records are accessible to other practitioners.
- Dispute resolution system - a mechanism for resolving boundary disputes must be in place. That mechanism should reflect the culture of the group that the survey system serves.

The Models

The following models of survey systems were reviewed:

- The Canada Lands Survey System.
- Adoption of provincial survey systems.
- A model similar to that created under the James Bay and Northeastern Quebec Agreements for the Cree/Naskapi lands.
- A model where a modified Canada Lands or provincial survey system id adopted - an aboriginal group may wish to create its own survey system based on either the Canada Lands Survey System or a provincial system, but with changes to better reflect the individual needs of the group.
- Canada Lands Survey System partnership with aboriginal groups - individual aboriginal groups would adopt and possibly adapt the Canada Lands Survey System. Under this model, the aboriginal group would adopt the system by taking over responsibility for some or all of the components of it. The system may be adapted by the aboriginal group in that changes might be made to it to better reflect the individual needs of the group. Those parts of the system that a

group may not wish to take responsibility for would continue to be managed by LSD or the Association of Canada Lands Surveyors (ACLS). Partnership agreements could be struck between the aboriginal group and LSD and ACLS to better define their individual responsibilities and for other services such as training.

Conclusions

This report stressed fundamental principles of land registration and surveying in the development of a series of options for land registration and survey systems for aboriginal lands. The intent of the report was to identify and examine the factors which should be considered when choosing such systems and to extrapolate from those factors and the experiences of Canadian and international models to develop a range of options for aboriginal groups to consider.

As individual aboriginal groups begin to develop their land tenure systems, they will be faced with the choice of land registration and survey systems. It is hoped that this report will be of assistance to them at that point.

Chapter 1

Introduction

This report has been commissioned by Legal Surveys Division of Geomatics Canada. Legal Surveys Division is charged with the responsibility of managing surveying and land information services on aboriginal lands in Canada. Part of that responsibility involves responding to existing and potential changes in the relationship between aboriginal peoples and government.

As aboriginal peoples assume more powers with regard to their lands, they will begin to design their own land tenure systems. Two of the components of a land tenure system are land registration and survey systems. Legal Surveys Division wishes to be in a position to be able to provide advice and support as aboriginal groups begin to address these issues.

The primary purpose of this report is to identify a range or series of options that aboriginal groups may consider as they determine what form of land registration and survey systems they will adopt for their lands. The report is structured as follows:

- Existing models of land tenure, land registration and survey systems on aboriginal lands in Canada are identified and examined. Incorporated within this material, basic concepts of land registration and survey systems are discussed;
- The experiences and results of land reform projects around the world are examined. From this material, the reasons for success or failure of specific projects can be applied to the Canadian situation and valuable lessons can be taken;
- The results of a wide range of structured and unstructured interviews with aboriginals who are dealing with land tenure issues are set out. In addition, literature on aboriginal experiences with these issues is examined. This material provides important aboriginal perspective to the issues; and
- Based on the preliminary material, a range of options for land registration and survey systems on aboriginal lands is defined and examined.

Chapter 2

Existing Models of Land Registration and Survey Systems on Aboriginal Lands

2.1 Purpose and Structure of this Chapter

The purpose of this chapter is to examine existing Canadian models of land registration and survey systems on aboriginal lands. This work is important because:

- baseline or *status quo* models for land registration and survey systems can be defined,
- models which depart from the baseline can be identified and examined, and
- the evolution of the existing models can be considered with a view to identifying the pressures which resulted in the departure from the baseline and predicting future evolution.

All of these factors can be taken into account in the task of defining a range of viable land registration and survey system models.

This chapter is structured as follows:

- basic terms and concepts will be defined,
- the baseline models for land registration and survey systems on aboriginal lands will be set out in brief,
- the pressures for change to the baseline models will be outlined,
- baseline and other existing models will be examined in some detail,
- the land tenure, land registration and survey systems on non-aboriginal lands in Canada will be examined, and
- conclusions will be drawn.

2.2 Basic Terms and Concepts

Land tenure may be defined as the manner in which rights to land are held in a jurisdiction [after Dale and McLaughlin, 1988, at p. 19]. A number of systems will be in place in any jurisdiction to support land tenure, including a land registration system and a survey system.

A land registration system is designed to ensure that all existing rights to individual parcels are identified, recognized by the governing authority and recorded in some suitable form [after Dale and McLaughlin, 1988 at p. 21]. Without an effective land registration system, the question of who held what rights in

what land would become uncertain. This situation would have a serious negative impact on the ability of a jurisdiction to develop its land and land-based resources.

A survey system is a set of principles, procedures and standards, together with human and technical resources, that are used in the production of cadastral (or legal) surveys. Dale and McLaughlin [1988 at p. 35] set out four functions of a cadastral survey:

- definition, demarcation, determination and retracement of boundaries,
- subdivision, assembly and re allotment of parcels,
- spatial organization of resources (political, administrative and land tenure boundaries), and
- provision of land information.

Without an effective survey system in a jurisdiction, over time boundaries would become more and more uncertain. Uncertain boundaries would have the same negative impact on land and resource development as uncertainty over who holds what rights to the land.

This report will review land registration and survey systems on aboriginal lands in Canada. The term "aboriginal lands" is not intended to have a precise definition, but simply to refer to lands in which Canada's aboriginal peoples have or may have an interest. It thus includes reserves, lands affected by land claims settlements and northern communities as well as other lands. The intent is to deal with lands in which the Legal Surveys Division may become involved on behalf of aboriginal groups or other government departments. Although the intent is to review only land registration and survey systems, the wider issues of land tenure must be considered. The land registration and survey systems in a jurisdiction must be designed to effectively and efficiently support the land tenure regime in that jurisdiction.

2.3 Baseline Models

Over the years, governments have developed land registration and survey systems for aboriginal lands. These existing systems will be briefly examined here and will be discussed in more detail below.

2.3.1 Land Registration Systems

Aboriginal lands are principally affected by the Indian Lands Registry as defined by the *Indian Act* [1985]. The Indian Lands Registry covers reserve lands under the *Indian Act*. In this report, aboriginal lands have been widey defined so as to include any land in which aboriginal groups may have an interest. At present, lands beyond reserves are generally covered other land registration systems. However, only the Indian Lands Registry will be considered as a baseline model.

The Indian Lands Registry is designed to deal with interests in land under the reserve system, including surrendered land and designated land as defined by that Act. It is a centralized system with one office located in Ottawa where the official records are kept. In addition, regional "mirror" sites are maintained where official duplicates of the records affecting that region are kept.

In Canada, land registration systems are typically identified as either private conveyancing, registration of deeds or registration of titles systems [Dale and McLaughlin, 1988, at p.21]. The Indian Lands Registry has characteristics of both the registration of deeds and registration of titles systems. Further details will be found below [see pp. 2.9 - 2.11].

2.3.2 Survey Systems

Boundaries on aboriginal lands are generally governed by the Canada Lands survey system. A survey system was defined above as a set of principles, procedures and standards, together with human and technical resources, that are used in the production of cadastral (or legal) surveys. In simpler terms, the survey system defines the location and physical extent of interests in land. The Canada Lands survey system has its legislative base in the *Canada Lands Surveys Act* [1985] which places responsibility for the management of surveys on Canada Lands in the hands of the Surveyor General of Canada, and thus, the Legal Surveys Division of Geomatics Canada. The *Canada Lands Surveys Act*, together with materials prepared pursuant to that Act (principally the Manual of Instructions for the Survey of Canada Lands) defines the principles, procedures and standards of the system. Human and technical resources are comprised of the employees and technical resources of the Legal Surveys Division together with those of that sector of the geomatics industry which is involved in surveys on Canada Lands, including the Association of Canada Lands Surveyors and its members.

One of the principle mandates of Legal Surveys Division is to manage surveys on Canada Lands on behalf of other federal government departments. Indian and Northern Affairs Canada (INAC) is one of the main users of Legal Surveys Division services. INAC carries the responsibility of discharging the federal governments responsibilities to aboriginal peoples and a large component of that task involves dealing with aboriginal lands. When surveys of aboriginal lands are required, Legal Surveys Division manages the survey function from procurement to archiving final survey products. Surveys might be required for a number of reasons, from simple subdivision for provision of new housing to perimeter surveys of settlement lands under land claims agreements.

As the nature of the land surveying function has broadened over the last twenty years to include many aspects of land information management, the scope of the activities of Legal Surveys Division, and indeed, of the Canada Lands survey system has also broadened. The survey system may now be described as including the following functions:

- provision of all cadastral survey products,
- provision of consultative services related to survey and land information needs to government departments and system users,
- definition of standards for survey products,
- provision of quality assurance related to survey products,
- regulation of survey practitioners, including admission and discipline,
- maintaining archives of survey information.

Further detail will be found below [see pp. 2.11 - 2.12].

2.4 Pressures on the Baseline Models

A number of factors have combined in recent years to exert pressure for change on the land registration and survey systems on aboriginal lands. These factors might be summarized as follows:

- economic pressures - a combination of increased development (in the widest sense) on aboriginal lands together with a reduction in budgets available to Federal government departments and agencies dealing with them has strained the survey system in particular. In addition, the remoteness and extent of some aboriginal lands tend to make surveys of them very expensive,
- social and political pressures - the aboriginal peoples of Canada have found voice in the last thirty years. There are intense pressures on governments to address centuries of neglect of aboriginal concerns. These pressures have resulted in a variety of responses including land claims settlements, self government agreements and the beginnings of a process of devolution of powers from government to aboriginal groups. In all of these processes there is a potential for transfer of management powers for land related issues. Thus, aboriginal groups will be faced with choosing systems for land registration and surveys which are appropriate to their needs and culture. This is therefore an opportune time to examine land registration and survey systems, and
- legal pressures - as aboriginal peoples have begun to define their own futures, a number of court challenges have been taken. These have covered a wide range of subject matters and many have related to land issues. These court decisions have in some instances redefined our understanding of aboriginal claims to the land. Again, it is an opportune time to examine the impact of these broad decisions on the more narrow subjects of land registration and survey systems on aboriginal lands.

2.5 Land Tenure, Land Registration and Survey Systems Affecting Aboriginal Lands

This section will examine the range of land tenure, land registration and survey systems in Canada which deal with aboriginal lands.

2.5.1 Concepts of Aboriginal Land Tenure

It is important to state at this point that most the systems that will be examined will have been designed by non-aboriginals. It is only very recently that aboriginal groups have been given the authority to develop their own land tenure systems. While still uncertain, it is reasonable to expect that the tenure systems that will be developed by aboriginals will reflect their cultures, customs and views of the relationship between land and people. Although generalization is dangerous, some basic statements may be made concerning traditional aboriginal land tenure systems. Usher [1996] states that aboriginal land tenure systems were communal. He states [at s. 2.1.2]:

> Even where 'family' territories existed, these systems combined principles of universal access and benefit within the group, universal involvement and consensus in management and territorial boundaries which were permeable according to social rules . . . In no case was land or wildlife considered a commodity that could be alienated to exclusive possession. All aboriginal peoples had systems of land tenure that involved allocation within the group, rules for conveyance of primary rights (and obligations) among individuals, the prerogative to grant or deny access to nonmembers, but not outright alienation.
>
> Typically, property rights in lands and resources included: (1) use by the group itself, and the right to include or exclude others (chiefly by determining membership); and (2) the right to permit others to utilize lands and resources. Excluded were the right to alienate or sell land to outsiders, to destroy or diminish land or resources, or to appropriate lands or resources for private gain without regard to reciprocal obligations.

Little Bear [1986 at p. 245] puts it this way:

> Indian ownership of property, like Indians' way of relating to the world, is holistic. Land is communally owned; ownership rests not in any one individual, but rather belongs to the tribe as a whole, as an entity. The members of a tribe have an undivided interest in the land; everybody as a whole, owns the whole. Furthermore, the land belongs not only to people presently living, but also to past and future generations, who are considered to be as much a part of the tribal entity as the present generation. In addition, the land belongs not only to human beings, but also to other living things (the plants and animals and sometimes even the rocks); they, too, have an interest.

Given this form of land tenure system, non-aboriginal land registration and survey systems are not only foreign, they are unnecessary. Indeed, aboriginal peoples lived for many thousands of years in present day Canada without the benefit of such systems, at least as they are presently conceived. The pressures of living in a predominately non-aboriginal society may be expected to have significant impacts on traditional land tenure systems. Where aboriginal groups wish to participate in a non-aboriginal economy, especially by development of land-based resources, traditional systems of land tenure may be inadequate to support that participation. It is thus reasonable to expect that the land tenure systems that are developed by aboriginal groups may incorporate some non-aboriginal concepts of land tenure. Land registration and survey systems *appear* to be inevitable requirements to support development of land-based resources. It is beyond the scope of this report to examine this question further.

2.5.2 Specific Models of Land Tenure, Land Registration and Survey Systems

The models to be examined in this chapter include those currently in existence and proposed systems. The background details of each model will be discussed including the basis of the system (i.e., legislation, agreement or administrative), what land and what people are covered by the system and the history and context of the system. The specifics of land tenure under each model will be briefly examined. Finally, the land registration and survey systems in place under each system will be examined. In some cases, the models identified are still being developed and it will be impossible to fully define their components.

The land tenure systems to be reviewed are defined by:

- The *Indian Act* and related legislation which deal with Indian reserves,
- The James Bay and Northeastern Quebec Agreements which deal with Cree and Naskapi Lands in Quebec,
- The Yukon Umbrella Agreement and Specific Sub-Agreements which deal with large portions of the Yukon Territory,
- The Northwest Territories and Yukon Innuvailuit Settlement,
- The Sechelt Self government Agreement which deals with lands of the Sechelt people of British Columbia,
- The Sahtu Dene and Metis and the Gwich'in Comprehensive Land Claim Agreements and the Yukon Transboundary Agreement with the Gwich'in,
- Section 53/60 Agreements under the *Indian Act*,
- The Alberta Metis Settlements legislation,
- The Nunavut Agreement,
- The Nisga'a Agreement which deals with the Nisga'a lands in British Columbia,
- The *First Nations Land Management Act* and Land Codes under it,
- The Dogrib First Nation Agreement,
- The Labrador Inuit Agreement, and

- Various Conceptual Models or Part Models including:
  - The Report of the Royal Commission on Aboriginal Peoples,
  - The Gathering Strength Policy of the Federal Government,
  - The Stevenson Kellogg Report on the Indian Lands Registry,
  - Policy or General Statements by the Federal Government or aboriginal groups, and,
  - Academic writings.

The intent is to examine these systems in rough chronological order so that any evolution in approach may be identified. Some of the systems will require a detailed analysis. Others may be addressed only briefly to highlight one or a few points.

Model 1 - The Indian Act and Related Legislation

Background

One of the pillars of the federal government's approach to dealing with aboriginal peoples has been the reserve system. A reserve is a tract of land which is held by the federal government for the use and benefit of a particular First Nation. In support of the reserve system, a complete land tenure system has been developed under the *Indian Act* [1985] which applies only to reserves. Caution should be exercised, however, because it is possible for a reserve to be under a different regime altogether as a result of legislation (e.g., the *First Nations Lands Management Act* [1999]) or for management of lands to have been transferred to individual First Nations (e.g., by exercise of the provisions of ss. 53 and/or 60 of the *Indian Act*). These models will be discussed later in this chapter.

Land Tenure

This section will provide a very brief and necessarily incomplete description of the land tenure system which exists on reserves under the *Indian Act*. For a more complete review, see Reiter [1996, pp. 674-780] or Woodward [1994, Chapters 8-10].

This land tenure system is created by legislation, principally the *Indian Act*, but also by related and subordinate legislation such as *The Indian Oil and Gas Act* [1985]. The system has a long history. The first Indian Act was passed in 1876. Many of the essential elements of the land tenure system established by that Act have remained unchanged in that time.

The essence of the reserve concept is that land (the reserve) is held by the federal government for the use and benefit of a specific First Nation. The structure may be compared to land held under a trust. Under a trust, legal title is held by the trustee and equitable or beneficial title is held by the beneficiaries under the terms of the trust. Under the reserve system, the federal government may be roughly equated to the trustee and the members of the First Nation may be equated to the beneficiaries of the reserve lands. The Indian interest in the reserve lands has been described as "a right to use and benefit from reserve lands." [Reiter, 1996 at p. 491]. Because of this structure, there are very strict limits on what interests First Nations or individual members can have in reserve lands.

Rights to the reserve lands are communally held by the members of a First Nation. The *Indian Act* uses the term "band." Under s. 2 of the Act, a band is defined as "a body of Indians for whose use and benefit in common, lands, the legal title to which is vested in Her Majesty, have been set apart . . . "

Under the provisions of s. 20 of the *Indian Act*, it is possible for an individual First Nation member to receive an allotment of exclusive rights to possession of a parcel within a reserve. These exclusive

rights may then be sold (or willed) to other members. Both the original allotment and any subsequent transfer of those rights are conditional on approval of the Minister [ss. 20(1), 24 and 49].

Under s. 28(2), the Minister may grant any person the right to occupy or use reserve lands by issuance of a permit. The permit may be for up to one year, or, with First Nation council approval, for any period.

Under s. 38, the Act specifies processes which allow the reserve status of parts of a reserve to be terminated (by the process of surrender) or suspended (by the process of designation) so that these lands may be sold (after surrender) or leased (after designation) to non members.

There are complex land tenure structures in place to deal with resource development on reserve lands. Under the *Indian Oil and Gas Act* [1985] and the Indian Oil and Gas Regulations [1994], management of oil and gas resources on reserve land is vested in Indian Oil and Gas Canada, a federal agency, for the benefit of the First Nation on which the resource is located. A series of rights permitting exploration and development are defined by the Regulations. The Indian Mining Regulations [1990] and the Indian Timber Regulations [1993 and 1994] provide mechanisms and procedures for the exploitation of minerals and timber on reserve lands. The Indian Mining Regulations set up a system of permits for exploration and leases for extraction as well as a royalty structure. The Indian Timber Regulations set up a scheme of permits and licences for removal of timber.

The *Indian Act* contains protections for the reserve land. Section 29 provides that reserve land is exempt from seizure under legal process. Section 35 provides that expropriating authorities may only expropriate reserve lands with the consent of the Governor in Council. Section 48(12) eliminates the common law rights of dower and curtsey and declares that there is no community of property in reserve land.

Land Registration System

The land registration system applicable to reserve, surrendered and designated lands is the Indian Lands Registry. Sections 21 and 55 of the *Indian Act* mandate the creation of a registry:

> 21. There shall be kept in the Department a register, to be known as the Reserve Land Register, in which shall be entered particulars relating to Certificates of Possession and Certificates of Occupation and other transactions respecting lands in a reserve.
> .....
>
> 55(1) There shall be kept in the Department a register, to be known as the Surrendered and Designated Lands Register, in which shall be entered particulars in connection with any transaction affecting absolutely surrendered or designated lands.

55(2) A conditional assignment (of a lease of designated lands) shall not be registered.

55(3) Registration of an assignment may be refused until proof of its execution has been furnished.

55(4) An assignment registered under this section is valid against an unregistered assignment or an assignment subsequently registered.

There is no provision in the *Indian Act* which authorizes the adoption of regulations related to a registry. From these brief references, Indian and Northern Affairs Canada (INAC) has created the Indian Lands Registry. Details of how the registry operates are set out in the Indian Lands Registration Manual [Canada, INAC, 1998], but the Manual has no legislative sanction.

The system actually contains several registers:

- a Reserve General Register under which documents related to entire reserves are registered,
- an Indian Lands Parcel Abstract Register under which documents are registered against individual parcels of reserve land, surrendered land and designated land,
- a Survey Book where registration plans are registered for each province, and
- a Canada Lands Survey Records index book where Canada Lands Survey Records plans are noted for each reserve.

In the Indian Lands Parcel Abstract Register, documents are registered against individual parcels. Thus, the indexing system is parcel-based, not name-based.

The system does not require registration in order for title to transfer. For example, an individual First Nation member may be allotted an exclusive right to use and occupy a portion of a reserve. The *Indian Act* requires that such a right be granted by the First Nation council and confirmed by the Minister. The appropriate documents may then be forwarded to the Indian Lands Registry for registration, but that step is apparently not necessary under the legislation for the interest to vest in the member. Similarly, a member may transfer his or her allotment to another member, again, with the approval of the Minister. Again, registration is apparently not required for the interest to vest in the new holder of the rights. There is no legislated system of priority for registered allotments over unregistered ones and a very weak scheme of priorities for assignment of leases of designated lands. Such a priority scheme is a critical element of a registration of deeds system. As a result, the system cannot conclusively answer the crucial question of who holds what rights in any specific parcel.

The system will not guarantee title. Upon registration of allotment documentation, the Registrar may issue the named member a Certificate of Possession "as evidence of his right to possession of the land described therein." [*Indian Act*, 1985, s. 20(2)]. The system will not guarantee that the individual

named in such a document is, in fact, the true holder of those rights. It will also not provide confirmation as to the status of the title to any particular parcel of reserve land as a registration of titles system would do.

It can thus be seen that the system functions neither as a registration of deeds system nor as a registration of titles system.

To further complicate the issue, in many reserves, the process set out in the *Indian Act* for allotments is being ignored [Reiter, 1996, p. 679 and Canada, NRCan, 1999]. Instead, First Nations are granting property rights to members through internal processes. It is clear that such a member would have a property interest, but the Indian Lands Registry would have no record of it.

Surrendered and designated lands are treated in a slightly better fashion. Under s. 55(4) noted above, assignments of leases of designated land may be registered in the system. There is some protection afforded to individuals who register assignments in that the *Indian Act* provides for registered assignments to have priority over unregistered or later registered assignments of the same interest. No provision is made for priority of any other type of registered document affecting surrendered or designated lands.

The Indian Lands Registry has been the subject of some criticism. Stevenson et al. [1988] noted that the Registry contained elements of both a registration of deeds system and a registration of titles system, but succeeded at being neither. That report is discussed further below [see pp. 2.45 - 2.46].

Survey System

Surveys of reserve lands are carried out under the Canada Lands Surveys System. That system is created under the provisions of the *Canada Lands Surveys Act* [1985] which is applicable to Canada Lands. That Act defines Canada Lands as follows (s. 24(1)):

> In this Part, "Canada Lands" means
>
> (a) any lands belonging to Her Majesty in right of Canada or of which the Government of Canada has power to dispose that are situated in the Yukon Territory, the Northwest Territories, Nunavut or in any National Park of Canada and any lands that are
>
> (i) surrendered lands or a reserve, as defined in the *Indian Act*,
>
> (ii) Category IA land or Category IA-N, as defined in the *Cree-Naskapi (of Quebec) Act*, Chapter 18 of the Statutes of Canada, 1984,
>
> (iii) Sechelt Lands, as defined in the *Sechelt Indian Band Self government Act*, chapter 27 of the Statutes of Canada, 1986, or

(iv) settlement land, as defined in the *Yukon First Nations Self government Act*, and lands in which an interest is transferred or recognized under section 21 of that Act; and

(b) any lands under water belonging to Her Majesty in right of Canada or in respect of any rights in which the Government of Canada has the power to dispose.

It is apparent that much aboriginal land will be Canada Lands. In some instances, aboriginal lands will fall outside of the category of Canada Lands and as a result, they may not be governed by the Canada Lands Survey System. In such cases, the lands will be governed by the relevant provincial survey system or possibly some other survey system defined by aboriginals themselves. Provincial survey systems will be considered below. The focus here will be on the Canada Lands Survey System as the baseline survey system for aboriginal lands.

The Canada Lands Survey System deals with a number of processes in support of the land tenure system in aboriginal lands affected by it. Those processes may be categorized as:

- subdivision - the creation of new parcels within aboriginal lands,
- jurisdictional boundary establishment and maintenance - dealing with the boundaries between aboriginal lands and non-aboriginal lands, either for existing reserves, or in support of land claims processes and/or self government agreements,
- preparation of surveys and mapping for management functions - typically preparing compilation mapping of reserves or other tracts of aboriginal lands,
- preparation of plans of retracement of individual parcels for specific purposes, and
- provision of advice on boundary matters and survey documentation to a variety of users.

The Canada Lands Survey System specifies survey products which may be produced. These may be placed into two categories. Official plans are based on field investigation and monumentation by a Canada Lands Surveyor and review and confirmation of the plan by the Surveyor General. Registration plans are graphical depictions of parcels or areas based on field investigations and/or compilations of existing records. They are not confirmed by the Surveyor General. Which type of plan is required in a given circumstance is governed by an agreement between Legal Surveys Division and Lands and Trusts Services of Indian and Northern Affairs Canada (INAC) [Canada, NRCan/INAC, 1997]. The factors governing the choice are:

- Type of boundary - jurisdictional boundaries will always require official plans, internal boundaries will require official or registration plans, depending on other factors;
- Type of transaction - allotments, transfers, surrenders and designations will generally be supported by registration plans, dispositions will generally require official plans. Leases will require one or the other depending on other factors;

- Length of lease - long term leases of land (more than forty-nine years) will require official plans. Shorter terms and leases of buildings will generally be supported by registration plans.

In any case, a party to a transaction may obtain an official plan if they so desire.

The Canada Lands Survey Records registry is maintained by Legal Surveys Division. It is a compilation of survey products (and field records) that have been produced in conjunction with surveys of Canada Lands. The records are widely used by those who deal with Canada Lands, and particularly with reserve lands. They are accessible through regional offices and client liaison units of Legal Surveys Division.

Model 2 - Cree and Naskapi Lands in Quebec

Background

In the early 1970's, the government of Quebec formulated plans for the extensive James Bay hydroelectric development. This series of proposed projects posed serious concerns for three aboriginal groups who had been living on the affected land, the Cree, the Inuit and the Naskapi peoples. None of these groups had signed treaties. A process of litigation and political action began which was designed to define and protect the rights of the affected aboriginal groups. Negotiations between the groups and the governments of Quebec and Canada eventually led to the signing of two agreements. The James Bay and Northern Quebec Agreement was signed in 1975 with the Cree and Inuit and the Northeastern Quebec Agreement was signed in 1978 with the Naskapi. The provisions of these agreements are similar enough for the purposes of this report to be considered together.

Land Tenure

Lands affected by the Agreements are placed into one of three categories as follows:

- Category I Lands are primarily the lands on which settlements are located. There are actually two types of Category I Land. Category 1A Lands (under the agreement with the Crees) and IA-N Lands (under the agreement with the Naskapi) are under the administration, management and control of the federal government and are held in trust for individual First Nations. The lands are not reserves within the meaning of the Indian Act, however, they have been specifically designated by the *Canada Lands Surveys Act* [1985] as Canada Lands. The Inuit under the James Bay Agreement did not receive any Category IA Land. Category 1B Lands under the agreement with the Cree (and 1B-N Lands under the agreement with the Naskapi) have been conveyed to municipal corporations under Quebec legislation. These municipal corporations, however, cannot sell the lands other than to the province of Quebec. The lands are under the jurisdiction of the province of Quebec.
- Category II Lands are under the jurisdiction of the province of Quebec. These lands typically adjoin Category I Lands. Relevant aboriginal groups have been given exclusive rights to hunt, fish and trap on these lands. The lands are neither reserves nor Canada Lands.
- Category III Lands are also under the jurisdiction of the province of Quebec. The lands are designated as public lands and aboriginal groups have exclusive rights to trap some species.

In summary, only Category IA and IA-N lands are subject to federal government control. All other lands affected by the agreements are under the jurisdiction of the province of Quebec. All other lands are therefore subject to land registration and survey systems applicable to the entire province. The balance of this section will thus consider only Category I-A and IA-N lands.

Management powers on Category IA and IA-N lands are shared between the First Nations and the federal government (in the case of the Naskapi) and the First Nations, the Regional Aboriginal Authority and the federal government in the case of the Cree. In both cases, the federal government has retained somewhat limited management powers for itself, namely in matters related to local taxation, bylaws related to hunting and trapping, elections, special meetings and referenda, long-term borrowing, the land registry system, expropriations and sanctions for breaking bylaws [*Cree Naskapi (of Quebec) Act*, 1985]. Thus, most of the land management powers (except the land registration system) have been vested in the aboriginal groups.

The *Cree Naskapi (of Quebec) Act* has extended certain exemptions to Category IA and IA-N lands roughly equivalent to the rights extended to reserves under the *Indian Act*, [1985], that is, the exemption from seizure [s. 190] and from the process of prescription [s. 140].

The land tenure system is unusual in that the aboriginal groups are given power to transfer rights to land or buildings. The type of right which may be granted varies based on whether the First Nation wishes to grant rights in land or rights in buildings. Under s. 132 (1) of the Act, the First Nation may grant:

1.1 with respect to its Category IA or IA-N land, a lease, usufruct, servitude, superficie or other right or use or occupation, and

1.2 with respect to its buildings on its Category IA or IA-N land, a lease, emphyteutic lease or usufruct, or a right of ownership, co-ownership, use or habitation, or other right of use or occupation, or, subject to the approval of the electors of the band described in subsection 193(3), a hypothec or other charge.

The terms of rights which may be granted in land under s. 132 are time limited by the *Cree Naskapi (of Quebec) Act* to a maximum of seventy-five years [s. 132 (2)]. A grant of any right to lands or buildings must be in writing and accepted in writing by the grantee [s. 133]. Rights granted in land may only be further transferred to a new grantee with the approval of the First Nation (although the original document may "pre-approve" a subsequent transfer) [s. 137].

Land Registration System

As noted above, Category IB and IB-N, Category II and III Lands are governed by the Quebec land registration system and will not be dealt with here.

Section 151 of the *Cree Naskapi (Quebec) Act* authorizes the federal government to make regulations establishing a land registry system for Category IA and IA-N lands. The system is created by the Cree-Naskapi Land Registry Regulations [1986], (hereinafter referred to as "the regulation.") The system which has been designed for the Cree-Naskapi is unique. Structurally, it consists of parallel registers. A central registry is maintained in Quebec City and individual local registries are maintained

locally (one for the Naskapi First Nation and eight Cree ones.) Central management functions of the entire system are carried out by the central registry in Quebec City. The land registration system established under the regulation is not a registration of titles system in that neither a guarantee of who holds rights nor compensation for errors is afforded by the system. The system is modelled as a registry of deeds system with parcel indexing.

The regulation requires the following index books to be maintained in both the central and the local registries [s. 16]:

- an entry book for recording in chronological order each document received in the office for registration;
- an index of names for recording in alphabetical order the name of every party to a document received for registration;
- an index of land where the registered rights against individual blocks of land are recorded;
- an index of buildings where registered rights against individual buildings are recorded; and
- a deposit index where miscellaneous documents (for example, notices of expropriation) may be recorded.

In order to effectively register documents in the system, they must be registered in both the central office and the local office. Documents submitted for registration must set out (*inter alia*) the nature of the interest being conveyed and the limits of the land or buildings that the interest affects [s. 22]. The registrar who receives a document for registration may reject it if it does not meet certain criteria. Among other requirements, the document must either set out the CRINA number of the right or interest, or both a sketch showing the boundaries of the land and/or buildings affected by the document and a metes and bounds description of the land and/or buildings [s. 23(1)]. A CRINA number is a unique parcel identifier number. When a document is accepted for registration, the registrar must stamp it, make certified copies and forward it to the other registry, either the central or local registry as the case may be, for confirmation of registration [s. 24(1)]. A document confirmed for registration is then entered in the appropriate indices in both the central and the local registry [s. 27]. Even after acceptance by both registries, a document is not considered to be "fully registered" unless either the extent of the right is shown on a survey under the *Canada Lands Surveys Act* [1985], or both registrars "are satisfied that the boundaries of the land or buildings, or both, that are the subject of the right or interest can be easily located on the ground." [s. 30(1)]. If this test is met, the right or interest is then depicted on the relevant land registry plan. A land registry plan is a large scale plan of the relevant community showing the layout of the parcels, buildings and other infrastructure such as streets. Land registry plans have been prepared for each community and represent the graphical index of the location of rights (and CRINA Numbers.) These plans have been prepared by Legal Surveys Division and are maintained by the registrars, often with the assistance of Legal Surveys Division staff [Sasseville, 1997].

Where a document has been registered but there is uncertainty as to the boundaries of the extent of the rights affected by it, the document is considered to be provisionally registered [s. 31]. Such a

document may be depicted on the land registry plan, but in such a fashion as to indicate that the depiction is provisional. A mechanism for resolution of overlaps or uncertainties as to the location of provisionally registered documents is set out in s. 32. The procedure contemplates a hearing to be presided over by the local and the central registrars.

The system as created by the regulation poses some troublesome questions:

- Registration of rights or interests may be cancelled if ordered by a court, if consented to by the parties, or if "in the opinion of the appropriate local land registrar and central land registrar, the location of the boundaries of the land or buildings, or both, that are the subject of the right or interest cannot be easily located on the ground." This is a somewhat remarkable provision, given that under s. 30(1) discussed above, the document is not to be fully registered unless the registrars are satisfied on the issue of certainty of location. Perhaps the section is intended to apply only to provisionally registered documents;
- The priorities provisions of the regulation are based on date of registration only. Notice of prior existing documents is not relevant. The system is thus a pure "race" system only as opposed to a "race/notice system." The system may therefore be unable to prevent some frauds;
- A significant level of responsibility (and thus power) is given to the registrars;
- The concept of provisionally or fully registered documents is unclear, given that the priorities provisions of the regulation award priority to a document as soon as it has been accepted for registration by both registrars, regardless of whether the registration has been provisional or full;
- The details of the priority granted by registration are not set out; and
- Provisions normally found in a registration of deeds systems, such as the protection of rights which might be discovered by physical examination (i.e., short term leases) are missing.

Survey System

A distinct survey system has been established for the Cree/Naskapi category 1A and 1A-N lands under the James Bay and Northern Quebec Agreements. These lands are specifically defined as Canada Lands by the *Canada Lands Surveys Act* [1985], and thus, the Canada Lands Survey System would normally apply, however, an alternative system has been developed. Some of the factors which influenced its design were [after Sasseville, 1997]:

- The system had to support a land tenure system where different rights were permitted to exist in land and in buildings located on that land;
- The system was required to support the creation of parcels which did not conform to the cadastral lots of the underlying Quebec survey system;
- The system was designed to be "easy to use, flexible and capable of quickly identifying and locating rights in land and buildings by methods other than the conventional surveying performed by a land surveyor . . . [where] . . . logistics makes the cost of surveying prohibitive in relation with the interest to be recorded."; and

- The system was designed to be "carried out by a local land registrar without detailed knowledge of cartography, surveying, identification and positioning of rights on maps, or updates of plans."

It is a graphically based system, that is, the definition of new parcels is based not on field surveys, but on large scale mapping. At the core of the system are land registry plans, is a series of 1:2000 maps of populated areas in the subject area. The land registry plans are then used to prepare plans for single parcels which are the subject of a transaction. As new parcels are created by subdivision (or by construction of a building), they are referenced to existing parcels or buildings. The extent of the new parcel is then depicted on the registry plan by the registrar. This depiction may be performed by the local land registrar or the central registrar, alone or with the assistance of Legal Surveys Division staff. If the holder of a right wishes, they may have a ground survey conducted by a Canada Lands Surveyor.

Model 3 - The Yukon Umbrella Agreement and Specific Agreements

Background

The Yukon Umbrella Agreement [Canada, INAC, 1993h] and specific agreements under it [eg., Canada, INAC, 1993b, 1993c, 1993e, 1993f, 1993i, 1993j] relate to up to 16,000 square miles of land in the Yukon Territory. The agreements fall under three categories [Canada, INAC, 1999b]:

- an umbrella final land claim agreement which establishes a framework for the entire agreement and contemplates individual agreements with each of the fourteen participating First Nations,
- individual agreements with participating First Nations which will adopt the framework of the umbrella agreement, but will be tailored to the special circumstances of that particular First Nation, and
- self government agreements with the participating First Nations.

At this date, the umbrella agreement has been completed and approved by the parties. Individual agreements and self government agreements have been ratified with seven of the First Nations. Negotiations continue.

Land Tenure

The lands in question comprise both original reserves and settlement lands transferred under the agreements. Original reserves may be dealt with in one of three ways at the option of the First Nation. First, the reserves may continue to be reserves under the *Indian Act* [1985] in which case they would continue to be governed by the land tenure, land registration and survey systems under that Act as discussed above. Alternatively, they may retain status as reserve lands but be subject to a negotiated regime of administration and ownership. Finally, they may be amalgamated with the settlement lands and lose reserve status [Canada, INAC, 1993h, s. 4.1.1, Lewis, 1999].

One of the interesting tenure features of the final agreement and the agreements under it is that the aboriginal groups explicitly did not extinguish their aboriginal rights and title to the settlement lands. The full implication of this fact may take some time to realize.

Settlement lands fall into three categories - Category A, Category B and fee simple lands. On Category A lands, the relevant First Nation will have fee simple equivalent title to the surface land and fee simple title to mines and minerals below the surface. On Category B lands, the relevant First Nation will have fee simple equivalent title to the surface land and the right to some subsurface substances such as carving stone, sand and gravel. Category A and B lands are selected by the relevant First Nation under their individual agreement. Fee simple lands are generally small parcels that had at one time been held privately but had reverted to the Crown, generally through failure to pay property taxes. The title to these parcels will be directly registered in the Yukon Land Titles Office. Title to any part of the

Category A or B lands can be converted to registered status in the Land Titles Office if the relevant group wishes and if they relinquish all claims to aboriginal rights and title to it [Keopke, 1999].

On all settlement lands, the rights acquired by the First Nations will be subject to any existing third party rights to the land or resources on the land and any other agreed rights which are specifically reserved [Canada, INAC, 1993h, s. 5.4.2]. One interesting aspect of this situation is that these third party rights will be administered by the federal government (or the Yukon government after devolution.) This situation is unique to this set of agreements [Lewis, 1999], and may pose some interesting co-management issues.

Title to settlement lands is vested in the aboriginal groups and is held for the benefit of group members. There are no restrictions on the ability of the aboriginal groups to divest themselves of these lands and no specific provisions dealing with what lesser interests can be granted by the aboriginal groups to individuals, either members of the group or third parties. Essentially, the First Nations are left to determine what land tenure scheme they want.

Land Registration System(s)

Three land registration systems may be applicable:

- If existing reserves are selected by the groups to retain their status under the *Indian Act*, they will be governed by the provisions of the Indian Lands Registry discussed above [Canada, INAC, 1993h, s. 4.1.1];
- The agreements contemplate that First Nations may establish their own land registration systems [Canada, INAC, 1993h, s. 5.5.1.4]. No specifics are given as to what types of system may be adopted. No First Nations governed by the agreements have as yet adopted their own systems [Keopke, 1999]. Therefore, no discussion is possible at this stage; and
- The Yukon land titles system will be applicable in some cases as discussed above.

Survey System

There is an issue as to whether or not settlement lands under the agreements are lands subject to the Canada Lands Survey System. The *Canada Lands Surveys Act* [1985, s. 21(1)(a)(iv)] was amended to explicitly include them. Keopke [1999] argues that this was a mistake. The issue is an important one for a number of reasons, but from a survey system perspective, the question is whether or not the lands are covered by the Canada Lands Survey System. The various agreements do not explicitly authorize groups to opt out of the system by adopting their own survey systems. The self government agreements do provide that the aboriginal group may "enact laws of a local or private nature on Settlement Land in relation to the following matters: .... Use, management, administration, control and protection of Settlement Land." [eg., Canada, INAC, 1993i, S. 13.3]. This clause clearly may be

broad enough to allow the group to adopt its own survey system. To date, no group has done so [Keopke, 1999].

Model 4 - The Northwest Territories and Yukon Inuvialuit Settlement

Background

The Inuvialuit of the Northwestern Northwest Territories and the northern Yukon entered into a land claims settlement in the early 1980's. The agreement covers some 35,000 square miles of land in the northwestern corner of the Northwest Territories and the northern portion of the Yukon Territory [Canada, INAC, 1997b].

Land Tenure

The Inuvialuit received title to various categories of land as follows:

- Section 7(1)(a) lands - approximately 5,000 square miles of land in fee simple, including subsurface rights in blocks located near existing communities;
- Section 7(1)(b) - approximately 30,000 square miles of land with fee simple rights to the surface only and subject to pre-existing rights.

Title to settlement lands is held by the Inuvialuit Land Corporation for the benefit of members of the aboriginal groups. The lands may not be permanently alienated except to members of the group or corporations controlled by them, or the federal government. Leases and other lesser interests may be conveyed.

Rights to the northern section of the Yukon Territory are also dealt with. These lands remain under the jurisdiction of the federal government and the Inuvialuit are given access rights to them.

Land Registration System(s)

The lands are intended to be subject to the land registration system of the North West Territories. The individual aboriginal groups have created their own systems to track internal allotments [Canada, EMR, 1990, p 4-11].

Survey System

The Canada Lands Survey System will apply.

Model 5 - The Sechelt Self government Agreement

Background

The Sechelt First Nation is situated near Vancouver. It controls approximately one thousand hectares of land which is in close proximity to a large non-native population. It is involved in a number of commercial enterprises and is financially sound. The First Nation had achieved the maximum amount of autonomy over management of its lands which was possible under the provisions of the *Indian Act* [1985], but still was constrained in pursuing development. The First Nation entered into negotiations with the federal and British Columbia governments and was successful in negotiating a self government agreement which gave it a significantly more direct control over the development of its lands as well as in other governance functions. The agreement became effective in 1988. [Canada, INAC, 1995b]

It is important to recognize that the agreement is independent of any settlement of specific or comprehensive land claims. It only deals with the powers of the First Nation to govern itself and its lands. The Sechelt were recently successful in coming to an agreement with both the federal and British Columbia governments on the terms of a land claim agreement. [Canada, INAC, 1999f]. Under the agreement, the First Nation will receive 933 Hectares of additional land [British Columbia, 1999, s. 2.2.0]. The new land will be governed by the provisions of the self government agreement. It is also important to note that as Taylor and Paget [1989] characterized it "This model was developed for a highly urbanized, strategically located, relatively prosperous band, holding lands with immense development potential." As such, the agreement may be inappropriate to the situation that other First Nations find themselves in.

The agreement is quite complex, involving as it does the federal and provincial governments, the Sechelt First Nation and another administrative structure - the Sechelt Indian Government District. It is impossible within the scope of this report to set out and explain all of its terms. The focus here will be on land tenure, land registration and survey systems.

Land Tenure

Prior to the coming into force of the agreement, the Sechelt lands were reserves and were thus governed by the provisions of the *Indian Act*. Under the terms of the agreement, title to those lands was conveyed to the First Nation [s. 23(1)]. The First Nation holds the land for the "use and benefit of the Band and its members." [s. 25]. The Sechelt are free to dispose of Sechelt lands as they see fit with some very minor exceptions [s. 24].

The First Nation has effective control of its lands and land-based resources, subject to its own Constitution [Sechelt, 1986]. The First Nation has voluntarily agreed to be bound by many of the provincial statutes and regulations which effect non-aboriginal lands in the vicinity. In effect, it has structured the management of its land along the same lines as a municipality under the relevant provincial

legislation. The province has passed legislation confirming this structure [*The Sechelt Indian Government District Enabling Act*, 1996].

The Sechelt Constitution allows for sale of lands (to members or non-members), but only if the sale is approved by 75% of the members on a vote on the issue. The Constitution allows the Council to authorize the transfer of any interest in Sechelt lands unless that interest is for some term exceeding 99 years or the land has not been previously improved [Div. 2, s. 5]. In such cases, the proposed transfer must be approved by a majority of electors [Div. 2, s. 6]. The First Nation is in a position to enter into long term (typically 99 years) leases of parcels of its lands to non-aboriginals, typically for residential purposes. This results in an assurance that the land will revert to the First Nation in the future, but allows for development by non-members. The Constitution provides that the Sechelt will not issue certificates of possession to its members [Div. 3, s.1] as would have occurred under the provisions of the *Indian Act*.

Land Registration System(s)

Etkin [1988, at p. 90 confirmed by Allen, 1999] indicates that the bulk of Sechelt lands is at this date still registered under the Indian Lands Registry. Section 14 of the *Sechelt Indian Band Self government Act*, [1986] provides that the Sechelt may enact laws relating to (*inter alia*) "the administration and management of property belonging to the Band." This provision may be interpreted as broad enough to authorize the Sechelt to develop their own land registration system. They have not opted to do this to date.

It was noted above that the Sechelt have the power to opt into specific provincial legislative schemes. Where they have decided to lease land to non-aboriginals, they have placed the parcels in question under the British Columbia *Land Title Act* [1996]. This gives purchasers a greater assurance as to the status if the leasehold title that they purchase.

Survey System

Sechelt Lands are specifically enumerated as Canada Lands by the *Canada Lands Surveys Act* [1985, s. 21(1)(a)(iii)]. Therefore, the Canada Lands Survey System would normally apply to them. In addition, the Constitution specifically provides [Div. 2, s. 7] that surveys conducted on Sechelt Lands will comply with the provisions of the *Canada Lands Surveys Act*. Notwithstanding this, if Sechelt Lands are registered under the British Columbia *Land Title Act*, the local registrar has refused to deal with any plans other than those prepared under the British Columbia survey system [Allen, 1999]. Thus, even though the lands are Canada Lands, plans of them are being prepared under the British Columbia survey system.

Model 6 - The Sahtu Dene and Metis and the Gwich'in Comprehensive Land Claim Agreements and the Yukon Transboundary Agreement with the Gwich'in

Background

The Dene and Metis peoples of the Sahtu region of the Northwest Territories and the Gwich'in peoples of the Northwest Territories the Yukon Territory entered into comprehensive land claim agreements with the federal government in the early 1990's [Canada, INAC, 1993d, Canada, INAC, 1992]. The agreements contemplate that the parties will enter into negotiations toward self government agreements.

Land Tenure

Under the agreements, the Sahtu Dene and Metis are to receive title to surface rights only in some 39,624 km.^{2} of land and full title (including subsurface rights) to an additional 1,813 square kilometres of land [s. 19]. The Gwich'in are to receive lands in the same two categories (16,264 km^2 and 4,299 km.^{2} respectively) [s. 18]. In addition, the Gwich'in are to receive title to subsurface rights only in 93 km.^{2} of land and title to surface and subsurface rights in 1,766 km.^{2} of land (not subject to existing third party rights.) [s. 18]. Title to Shatu and Gwich'in lands vests in specified aboriginal organizations.

Part of the lands to which the groups have surface rights only will be designated as "municipal lands" which are to comprise existing residential settlements. Municipal lands are held by the aboriginal group, but may be conveyed to anyone. When that happens, the lands cease to be Shatu or Gwich'in Lands [Canada, INAC, 1993d, s. 23 and Canada, INAC, 1992, s. 22].

Settlement lands are to be held collectively and (except for municipal lands) may not be absolutely conveyed other than to the Crown or a designated aboriginal organization. In general, only beneficiaries under the agreements will be permitted access to these lands. Those beneficiaries will have exclusive rights of hunting and tapping on them.

Land Registration System(s)

The agreements contemplate use of the registration of titles system in place in the Territories. Title to Gwich'in Lands is to be registered in the Northwest Territories Land Titles Office [s. 18.3.5]. Title to Shatu Lands was to be similarly registered [s. 19.3.5]

The Shatu self government framework agreement contemplates that the parties may negotiate matters related to the "use, management, administration, control and protection of settlement lands." [Canada, 1993d, Appendix B, S.4]. Following adoption of such a self government agreement, the Shatu may be free to adopt their own land registration systems. Surprisingly, there is no parallel provision in the Gwich'in Land Claims Agreement.

Survey System

The Canada Lands Survey System will apply. See the comment regarding proposed self government agreement for the Shatu above. Following adoption of a self government agreement, the Shatu may be free to adopt their own survey system.

Model 7 - Section 53/60 First Nations

Background

The *Indian Act* [1985] contains two sections that allow the Minister of Indian and Northern Affairs Canada (INAC) to transfer some land management powers to an individual First Nation.

S. 53 provides as follows:

> 53 (1) The Minister or a person appointed by the Minister for the purpose may, in accordance with this Act and the terms of the absolute surrender or designation, as the case may be,
>
> - manage or sell absolutely surrendered lands; or
> - manage, lease or carry out any other transaction affecting designated lands.

S. 60 provides as follows:

> 60 (1) The Governor in Council may at the request of a band grant to the band the right to exercise such control and management over lands in the reserve occupied by that band as the Governor in Council considers desirable.

Reiter [1996, at pp 710-718] sets out procedures followed by INAC in considering entering into these types of agreements. A prerequisite is a training program for First Nation personnel. Only a small number of First Nations have acquired powers under these sections to exercise additional control over their lands [Canada, Library of Parliament, 1999, at pp 8-9].

Land Tenure

The purpose of a 53/60 agreement is to pass some of the management and control of reserve land, surrendered land and designated land from the Minister to the First Nation. Section 53/60 agreements have no effect on the status of the aboriginal lands. They retain their status as reserves and they continue to be governed by the provisions of the *Indian Act*. Administrative control of some functions is transferred from INAC to the First Nation.

Land Registration System

Lands which are affected by a S. 53/60 agreement retain their status as reserves, surrendered or designated lands and thus will be under the jurisdiction of the Indian Lands Registry System.

Survey System

Lands which are subject to a S. 53/60 agreement continue to be Canada Lands and are thus subject to the Canada Lands Survey System.

Model 8 - The Alberta Metis Settlements Legislation

Background

In 1938, the Province of Alberta passed the *Metis Betterment Act* [1938]. The purposes of that Act have been described as [after Martin, 1989]:

- government would assist Metis groups in organizing settlement associations;
- unoccupied provincial crown land could be set aside for settlement by members of these associations;
- the associations could develop a constitution and bylaws providing the basic framework for local self government; and
- the associations, in cooperation with government, could formulate schemes for "bettering its members and settling them on the reserved lands."

The Act remained in force until 1988 when the current *Metis Settlements Act* [1996] and the *Metis Settlements Land Protection Act* [1996] replaced it. The former is the mechanism whereby the Metis groups achieve a form of self government. The latter is the mechanism the province of Alberta used to transfer lands to the Metis groups. The legislation sets up an administrative scheme where the Metis Settlements General Council is the primary Metis government body. Each individual settlement is governed locally by a Settlement Council.

The lands affected by the legislation comprise some 1.28 million acres [Wall, 1998].

Land Tenure

Under the legislative scheme, title to land transferred to the Metis groups is held by the Metis Settlements General Council for the benefit of members of the individual settlement groups. Title to the lands in question is transferred to the General Council, excluding subsurface rights, which are retained by the province. Preexisting rights are not affected.

There are limits on interests that the General Council may convey in these lands. An absolute interest may only be conveyed by the General Council with the consent of the Crown, the General Council, a majority of the settlement members of the particular settlement where the land is located, and a majority of all settlement members of all settlements. Lesser interests may be conveyed as set out below.

Individual members of the group may acquire various forms of title to the settlement lands, all less than absolute interests. The forms of title which a member may hold are as follows:

- Metis Title - this title is the highest that a member may acquire in settlement lands. The Metis Land Policy states that the holder of Metis Title in a parcel has the exclusive right:

- to use and occupy the land;
- to make improvements to the land;
- to transfer Metis title;
- to grant lesser interests as set out in this Policy; and
- to determine who receives Metis title on the holder's death.

- Provisional Metis Title - the Metis Settlement Councils may grant provisional Metis Title to a settlement member on the understanding that it may mature into Metis Title on the happening of certain events. Generally, the conditions to be met to convert Provisional Metis title to Metis title relate to improvements which must be made to the land. The holder of Provisional Metis Title will have the right of exclusive use and occupation of the land for a fixed period of time (generally five years with the possibility of renewal for a further five years.) When and if the conditions are met, the holder of the Provisional Metis title may apply to the Settlement Council for Metis Title to the lands. If the conditions are not met, the Settlement Council may terminate the Provisional Metis title.

- Allotment - A Settlement Council may grant a parcel to an individual by way of allotment for specified purposes, such as ranching, farming or the operation of a business on the land. Allotments are for a specified period of time. The holder of an allotment will have the exclusive right to use and occupy the land for the stated purpose.

There are restrictions on the amount of land that an individual member of a settlement may hold, to whom and for how long a member may lease lands, what type of lesser interest may be granted and the process for such grants and the granting of security interests. Metis title, Provisional Metis title and Allotments may only by solely owned, that is concurrent ownership by way of joint tenancy or tenancy in common is prohibited.

Non-members of the settlements may hold lesser interests in the lands by way of leases. The Settlement Councils may grant leases to non-members for up to ten year terms. Longer terms must be supported by a Council bylaw. Individual members may lease their lands held by Metis Title to non-members but only with the consent of the settlement. Other lesser interests are also permitted.

Land Registration System

The legislation creates an entirely separate land registration system for Metis Settlement Land. A lengthy regulation [Alberta, 1991] sets out much of the detail of the system. Bell [1994 at p. 26] indicates that the registry regulation is based on the recommendations of the Joint Provincial Land Titles Committee which published recommendations for a model land registration and recording act at about the time that the Metis Land Registry Regulations were being drafted. The land registration system is a registration of titles system with some interesting provisions.

Three registers are created by the system, a fee simple register, a metis title register, and an interests register. Fee simple title to the settlement lands is vested in the Metis Settlement General Council and is registered as such in the fee simple register. Metis title held by settlement members may be registered in the Metis title register. Finally, an interest register is established to reflect other rights in the land such as Provisional Metis title, allotments or lesser interests.

The system allows for two levels of filing of documents - recording or registering. A recorded document establishes priority over non-recorded or later recorded documents. A registered document establishes both priority of the document and title in the grantee named therein. A document may be recorded when the transaction on which the interest claimed is based does not meet all of the required formalities. This process allows for a claimant under a "substandard" transaction to record a summary of the transaction and thus establish his or her claim to the interest in the registration system. Transactions which do meet all of the formal requirements may be registered. A document which had been recorded may subsequently be registered if further confirmation of the transaction which the recording supports is received.

An insurance fund is in place to compensate persons who suffer damages as a result of the system working improperly. Appeals related to the workings of the system are not made exclusively to the Alberta court system, but may instead be made to the Appeals Tribunal created under the *Metis Settlements Act*.

Survey System

The legislation indicates (or at least implies) that the Alberta survey system applies. There is one important modification to the requirements of the Alberta System. Under both the Metis land registration system and the Alberta Land Titles Act [1996], recorded plans which have the effect of subdividing lands may be subdivision plans or descriptive plans. Under the Alberta *Land Titles Act*, both must generally be signed by an Alberta Land Surveyor (S. 89(3)). The exception is that the Registrar may sign a descriptive plan under s. 89(1), however this power is not generally used to create subdivisions [Sullivan, 1999]. Under the Metis land registration system, a descriptive plan may be signed by anyone. The Alberta Land Surveyors Association has adopted standards [ALSA, 1995] related to the preparation of descriptive plans under the *Land Titles Act*. There are no such standards applicable to preparation of descriptive plans under the Metis Settlements Land Registry Regulation. The regulation simply requires that the descriptive plan "be prepared in a manner and on a medium that is satisfactory to the Registrar," and "contain sufficient detail so that, in the opinion of the Registrar, the boundaries of the parcel for the relevant interests can be ascertained from the plan."

A conversation with staff at the land registration office indicates that a draftsperson in the employ of the registry often completes these descriptive plans on behalf of members.

Model 9 - The Nunavut Agreement

Background

The Nunavut Settlement Area Agreement [Canada, INAC, 1993a] is a land claim settlement affecting some 135,000 square miles of land in the former eastern Northwest Territories. In addition to the land claim settlement, a self government agreement was effected by the creation of the new territory of Nunavut. Both of these will be discussed below.

Land Tenure

The Nunavut agreement creates two categories of land which are transferred to Designated Inuit Organizations. These two categories are:

- Category 19.2.1(a) lands. These lands (including subsurface rights) are conveyed in fee simple to the Inuit Organizations. These lands total a minimum of 14,274 square miles divided among six regions;
- Category 19.2.1(b) lands. Surface rights to these lands are conveyed in fee simple to the Inuit Organizations. In addition, some subsurface rights to specified substances (primarily sand and gravel) are conveyed. Government retains the balance of the subsurface rights. These lands total a minimum of 121,718 square miles of land.

Under both categories, if a third party right was in existence at the time of the conveyance to the Organization, it continued.

There are restrictions on the powers of the Designated Inuit Organizations to transfer interests in settlement lands. Essentially, the Organizations cannot transfer absolute interests in the lands except to other Designated Inuit Organizations, government or municipal corporations. The Organizations may convey less than absolute interests (i.e., leases or rights to develop minerals)

Individuals or groups of beneficiaries may also establish outpost camps for the purpose of wildlife harvesting and associated activities (including residential activities) [Canada, INAC, 1993a, Article 7.2]. These outpost camps may be established anywhere except on lands held by someone other than a Designated Inuit Organization, or lands held by way of a surface lease. The individual or group which establishes an outpost camp holds title as a tenant-at-will, that is, they may be required to leave on reasonable notice and on provision of a replacement site [Article. 7.4]

Another category of land dealt with by the agreement is Municipal Lands [Article 14]. Lands making up a settlement are to be conveyed to Municipal corporations (except those lands which are Inuit Lands, designated Crown Lands (including mines and minerals) and privately held lands. These lands are to be held by the Municipal corporation. Based on the results of a referendum in which all

municipal residents may vote, the Municipal lands may be subject to alienation, or the Municipal corporation may only grant interests of less than 99 years duration.

Land held by the Designated Inuit Organizations amounts to approximately 18% of the total land area of Nunavut [Canada, INAC, 1993h].

Land Registration System(s)

The entire territory of Nunavut will be governed by a land registration system adopted by the territorial government. Title to Inuit Owned Lands under the land claims agreement will be registered in that land registration system [Canada, INAC, 1993a, Part 3].

Note that there are some reserves under the *Indian Act* [1985] which remain in existence following the creation of the new territory. Those reserves will be governed by the terms of the *Indian Act* and be subject to the Indian Lands Registry.

Survey System

The Canada Lands Survey System applies. The new Territory may have legislative power to define its own survey system.

Model 10 - The Nisga'a Agreement

Background

In 1996, the federal government, the government of the province of British Columbia and the Nisga'a people entered into an agreement in principle [Canada, INAC, 1993g]. The agreement constitutes a land claim settlement in combination with a self government agreement. It affects traditional Nisga'a lands in the Lower Nass River area of northern British Columbia. At the time of the writing of this report, the agreement had been ratified by the Nisga'a people and the government of British Columbia and its ratification by the federal government was being debated in the House of Commons.

Land Tenure

Approximately 1,930 square kilometres of land will be conveyed to the Nisga'a Nation, subject to existing interests. Settlement lands are designated as Nisga'a Lands and will be held communally, that is, held by the Nisga'a Nation for the benefit of its members. In addition, land comprising current reserves and some other parcels outside of the above lands will be conveyed to the Nisga'a Nation. These lands are designated as Fee Simple Lands and there are two categories of them. Category A Lands include sub-surface minerals while Category B Lands exclude them. Finally, the Nisga'a Nation will receive a "backcountry recreation tenure" or commercial recreational tenure to lands outside of either of the above categories. On these lands, the Nisga'a peoples will be entitled to conduct commercial guiding and hiking activities.

Nisga'a Lands and Fee Simple Lands will be removed from the provisions of the *Indian Act* [1985]. The agreement provides that the Nisga'a government may make laws in respect of Nisga'a lands and assets including "the use, possession, and management of Nisga'a Lands . . . " [see Nisga'a Government, 1999d]. The Nisga'a Nation may grant any right or rights to Nisga'a Lands or fee simple lands. Nisga'a Lands which are conveyed retain their status as Nisga'a Lands.

Land Registration System(s)

The agreement sets out the intention that Nisga'a Lands may be under the jurisdiction of the British Columbia *Land Title Act* [1996] or under a land registration system developed and managed by the Nisga'a themselves [Nisga'a Government, 1999c].

Category A and B fee simple lands will be entered into the British Columbia Land Title System on the date of transfer. Nisga'a Lands may then be registered in the British Columbia system at the option of the Nisga'a.

The Nisga'a website [Nisga'a Government, 1999c] makes the following comment:

> The provincial land title system is a fundamental part of real property rights in British Columbia. It provides the means for owners and purchasers of land, and holders of interests in land such as mortgages or rights-of-way, to have certainty about their interests. If an interest in land is registered in the provincial system, that interest is guaranteed by the provincial assurance fund. While the Treaty provides that the Nisga'a Nation with the authority to establish a Nisga'a land registry or land title system, it may be that to achieve the full economic benefit of a particular parcel of land it will be advantageous to have title to that parcel registered in the provincial system. Under the Treaty, it will be up to the Nisga'a Nation to make that decision.

Survey System

It is presently unclear whether or not the Nisga'a lands will be designated as Canada Lands. If they are, then the Canada Lands Survey System will apply to them. Note, however, that the Sechelt lands were effectively forced under the British Columbia survey system when they were registered under the British Columbia *Land Title Act* when the local registrar refused to deal with plans other than those prepared under that system.

Pursuant to the self government powers to be vested in the Nisga'a Nation, it may also be possible for the Nisga'a to design their own survey system.

Model 11 - The First Nations Land Management Act

Background

The *First Nations Land Management Act* [1999] is recent federal legislation designed to allow First Nations to opt out of some of the land tenure provisions of the *Indian Act*, [1999] and to substitute their own land management codes to manage reserve land and resources. The Act is designed to implement the Framework Agreement on First Nations Land Management of 1996. That agreement was signed between the Federal Government and fourteen First Nations.

Land Tenure

The Act applies to reserves and all interests and resources on those reserves to which federal law would apply. The land in question continues to be reserve land and thus, will continue to be held by the federal government and set apart for the use and benefit of the First Nation in question.

The purpose of the Act is to transfer management powers to individual First Nations. The Act sets out what powers First Nations may have to manage the lands. S. 18 (1) provides that a first nation will have:

> ...the power to manage first nation land and, in particular, may
> - exercise the powers, rights and privileges of an owner in relation to that land;
> - grant interests in and licences in relation to that land;
> - manage the natural resources of that land; and
> - receive and use all moneys acquired by or on behalf of the first nation under its land code.

S. 20 further provides:

> (1) The Council of a first nation has, in accordance with its land code, the power to enact laws respecting
> 1. interests in and licences in relation to first nation land;
> 2. the development, conservation, protection, management, use and possession of first nation land; and
> 3. any matter arising out of or ancillary to the exercise of that power.
>
> (2) Without restricting the generality of subsection (1), the first nation laws may include laws respecting
> 1. the regulation, control or prohibition of land use and development including zoning and subdivision control;

2. subject to section 5, the creation, acquisition and granting of interests in and licences in relation to first nation land and prohibitions in relation thereto;
3. environmental assessment and environmental protection;
4. the provision of local services in relation to first nation land and the imposition of equitable user charges for those services; and
5. the provision of services for the resolution of disputes in relation to first nation land.

S. 26 provides that first nation land governed by the Act is not to be alienated except in exchange for other land.

When a First Nation wishes to take over management of its reserve lands under the Act, it must develop an explicit land code setting out the rights and responsibilities of individuals on the reserve [s. 6].

Land Registration System

The Act contemplates a new system for registration of rights to land. S. 25 creates the First Nations Land Register and makes provision for regulations related to its structure. To date, the regulations have not been adopted. Indian Affairs and Northern Development Canada, (INAC) has taken the view that the First Nations Land Register will simply be a sub-register of the Indian Lands Registry and that the preparation of the regulations contemplated by the Act may be postponed by up to five years [Desrosiers, 1999].

In at least one case, INAC has agreed to maintain a sub registry under the Indian Lands Registry for the relevant lands until the aboriginal group creates its own registration system [Canada, INAC, 1999a].

Survey System

The Act does not specifically address the issue of a survey system for lands governed by the Act, but it would appear that the development of a new survey system would be permissible under the Act. Lands held by a First Nation participating in the Act would continue to be Canada Lands since they continue to be reserves. Therefore, until such time as a First Nation adopted its own survey system, the Canada Lands Survey System would continue to apply.

Model 12 - The Dogrib Land Claim Agreement in Principle

In August of 1999, the Dogrib First Nation entered into an agreement in principle with the federal government relating to a land claim and provisions for self government [Canada, INAC, 1999c]. The lands affected by the agreement form part of the Northwest Territories and are bounded by the Nunavut Territory, the Shatu Settlement area, the Deh Cho Region and the South Slave Region.

Land Tenure

Under the land claim agreement, the Dogrib Nation will acquire title to 38,850 square kilometres of land, including surface and subsurface rights [s. 18.1.1]. These lands will be held by the Dogrib First Nations Government on behalf of the Dogrib First Nation but will be subject to preexisting rights [s. 18.1.1]. Absolute title to the lands may only be conveyed to government or an expropriating authority [s. 18.1.4]. Lesser interests in the lands may be conveyed to anyone. These lesser interests include leases, licences or the right to extract natural resources [s. 18.1.6]. The lands are provided protection from seizure and prescription [s. 18.1.7 and 18.1.10]. The lands may not be mortgaged or charged as security [s. 18.1.8].

Lands situated within the boundaries of defined communities will be conveyed to Dogrib Community Governments subject to existing rights [s. 9.1]. Dogrib Community Governments may not convey absolute interests in these lands and may not grant other interests which might last for more than 99 years [s. 9.3.4]. These restrictions may be removed after a twenty-year period and with the approval of a majority of community residents.

Land Registration System

The agreement provides that the title to the lands to be transferred to the Dogrib will be registered in the Northwest Territories Land Titles Office [s. 18.5.1]. Significantly, a footnote to that section states that "18.5.1 will be re-visited and further developed before the date of the initialling of the Agreement." Keopke [1999] indicates that this provision related to the issue of the assertion of aboriginal rights and title to the settlement lands and believes that the lands will be registered. The self government provisions of the agreement provide that [s. 7.4.2]:

> The Dogrib First Nation Government has the power to enact laws in relation to the use, management, administration and protection of Dogrib lands and the renewal and non-renewable resources found thereon, including, for greater certainty, laws respecting
>
> (a) the granting of interests in Dogrib lands and the expropriation of such interests by the Dogrib First Nation Government;.....

This power appears to be wide enough for the Dogrib Government to establish its own land registration system.

Survey System

The agreement does not specifically address the survey system to be used. The lands will apparently still be governed by the Canada Lands Survey System unless some other system is put in place. The self government provisions set out above would also be wide enough to support the Dogrib Government setting up its own survey system.

Model 13 - The Labrador Inuit Agreement

The Inuit peoples of Labrador entered into an agreement in principle with the federal and Newfoundland governments in August of 1999. The agreement commits the parties to a framework to negotiate a land claims settlement and a self government agreement [Newfoundland, 1999].

Land Tenure

Under the framework land claims settlement, the total settlement area will consist of 72,520 square kilometres of land and 44,030 square kilometres of ocean (out to a twelve-mile limit.) Of that total, 15,800 square kilometres of land will be held by the group as Labrador Inuit Lands. Under the self government portion the framework agreement, an Inuit Central Government will hold the land on behalf of the group and make laws in some areas of jurisdiction of general application to the entire group. There will also be five Inuit Community Governments that may regulate in some areas of local concern.

The lands conveyed to the Inuit Central Government will be held by that entity with regard to surface title only (and subject to preexisting interests.) The Inuit Central Government is prohibited from conveying an absolute interest in these lands except to the governments of Canada or Newfoundland. The Newfoundland government and the Inuit Central Government will be joint holders of the sub-surface rights - Newfoundland holding 75% and the Inuit 25%. The Inuit Community governments will hold surface title to the land within the boundaries of the community, except where other interests are preexisting [s. 17.9]. Lesser interests to surface rights may be granted by the Inuit Central Government as they see fit.

The Inuit will also have the ability to occupy seasonal harvesting camps on lands outside of the settlement lands. These Aullasimavet sites may be identified before the signing of the final Agreement, and if the Inuit wish to develop other sites following the coming into force of the Agreement, they may apply to the Newfoundland government for permission.

Land Registration System(s)

The agreement does not explicitly address the issue of a land registration system. The Inuit Central Government has legislative jurisdiction over "the establishment of a system of administration for the governance of Labrador Inuit Lands." [s. 17.7.15]. Under s. 17.7.6, the Central Government may also make "laws in relation to the management and administration of the rights, benefits and responsibilities of the Inuit set out in the agreement . . . " These provisions are intended to mean that the Inuit may establish their own land registration systems [Warren, 1999]. Alternatively, they may wish to adopt the Newfoundland land registration system. The process is not far enough along to be able to determine which system the Inuit will choose.

Survey System

The comments noted in the discussion of land registration systems above may be repeated here. It is intended that the Inuit may choose the appropriate survey system for the settlement lands. Clearly, with subsurface rights shared with the Government of Newfoundland, plans of these subsurface rights will be prepared under the Newfoundland provincial system.

Various Conceptual Models

The Royal Commission on Aboriginal Peoples

The Royal Commission on Aboriginal Peoples (RCAP) was created in 1991 with the following mandate: [RCAP, 1995]

> The Commission of Inquiry should investigate the evolution of the relationship among aboriginal peoples (Indian, Inuit and Métis), the Canadian government, and Canadian society as a whole. It should propose specific solutions, rooted in domestic and international experience, to the problems which have plagued those relationships and which confront aboriginal peoples today. The Commission should examine all issues which it deems to be relevant to any or all of the aboriginal peoples of Canada . . .

The Commission conducted public hearings and commissioned research papers on a wide range of topics. It delivered its final report in 1995 [RCAP, 1995]. The report considers the state of aboriginal peoples today and makes sweeping recommendations for change. Since land and their relationship to it is a critical aspect of aboriginal cultures, many of the recommendations relate to land issues. Two of the most relevant to this report are:

> Recommendation 2.4.2 - Federal, provincial and territorial governments, through negotiation, provide aboriginal nations with lands that are sufficient in size and quality to foster aboriginal economic self-reliance and cultural and political autonomy;
>
> Recommendation 2.4.11 - With respect to Category I lands [that is lands which have been absolutely transferred to aboriginal nations in support of Recommendation 2.4.2],
> 1. The aboriginal nation has full rights of ownership and primary jurisdiction in relation to lands and renewable and non-renewable resources, including water, in accordance with the traditions of land tenure and governance of the nation in question.

Implicit in the latter recommendation (and explicit in other areas of the Report) are powers in aboriginal groups to regulate with respect to land tenure, land registration and survey systems. The Report notes that the expression of that power to regulate will reflect the individual circumstances and culture of each aboriginal group. It thus makes no recommendations with respect to specific models for any of these systems.

Gathering Strength

The federal government responded to the Report of the Royal Commission on Aboriginal Peoples by publishing "Gathering Strength - Canada's Aboriginal Action Plan." [Canada, INAC, 1997a]. Of particular interest to this report is that section of the document that deals with Professional Development. The document states:

> Professional Development in Land, Environment and Resource Management
>
> The Government of Canada, in partnership with First Nations, intends to develop and implement professional development strategies in the following key areas:
> ....
> • Land and Resource Management: initiatives will support accelerated transfer to First Nations of land management, land registry and survey functions.

Clearly, the federal government contemplates transfer of land registry and survey functions to aboriginal groups. The document makes no specific statement as to how the delivery of those functions should be accomplished. Implicitly, the relevant groups could choose the land registry and survey systems that suited their needs and circumstances.

Policy Positions

The Federal Governments Policy Guide for Aboriginal Self Government [Canada, INAC, 1995a] makes some statements relevant to land registration and survey systems. The document states:

> Government views the scope of aboriginal jurisdiction or authority as likely extending to matters that are internal to the group, integral to its distinct aboriginal culture, and essential to its operation as a government or institution. Under this approach, the range of matters that the federal government would see as subjects for negotiation (in a self government agreement) could include all, some, or parts of the following:
>
> .....
> -property rights, including succession and estates;
> -land management, including: zoning; service fees; land tenure and access;
> -expropriation of aboriginal land by aboriginal governments for their own public purposes; and
> -natural resource management
> .....

Clearly, this contemplates aboriginal groups assuming responsibility for land registration and survey systems.

Stevenson Kellogg Report

The Stevenson Kellogg Report [Stevenson et al., 1988] was commissioned by the Department of Indian Affairs and Northern Development (as it then was). One aspect of the review undertaken by the consultant was the Indian Lands Registry. The report of the Phase II study of the Registry was delivered in 1988. The Phase II study had a mandate:

> To provide a situational analysis of the Indian Land Registry to make assessments relative to organizational strength, finalize problem definitions, finalize identification of alternative solutions and provide recommendations.

The Report made a series of recommendations that impacted on the land registration system under the Indian Lands Registry as well as the survey system. A paraphrased summary of the more relevant recommendations follows:

With regard to the land registration system:

- the computerization of the system needed to be rewritten and revised. This would have corrected administrative difficulties (i.e., a lack of security and quality control features) and allow for remote access to the original (Ottawa based) records rather than possibly incorrect duplicates of the originals at satellite offices;
- standardized conversion and registration procedures needed to be developed and followed;
- the records for surrendered lands needed to be computerized;
- human resources needed to be more effectively organized;
- fundamental issues needed to be addressed-
    - should the registry be based on the registry of deeds or registration of titles model;
    - what responsibilities should the Minister assume in transactions between individual First Nation members;

  The Report advised the adoption of a new Indian Land Act to address these fundamental issues legislatively. It recommended that the registry be developed as a registry of deeds system.

With regard to the Survey System:

- a survey registry should be introduced;
- due to the perceived high cost of "full CLS plans," different types of plans should be accepted for registration in some circumstances, although ultimately, a "CLS survey" would be required in most instances.
- the quality of surveys needed to be improved. The Report noted that surveys provided by contractors retained by EMR (as it was at that time) often fell below acceptable standards;
- a number of survey specific problems were noted, including:
    - there was no mechanism to adjust boundaries and record that adjustment,

    - partial plan revisions were not possible,
    - it was possible to create landlocked parcels, and
    - First Nation council approval was needed for survey plans.
- More use should be made of reference plans, and
- The source of funding of some survey activities should be reconsidered.

Many of the recommendations of the Stevenson Kellogg Report have been addressed by government. The more fundamental ones have not. The essential nature of the Indian Lands Registry has not changed.

2.6 Summary of Models Applicable to Aboriginal Lands

The following table summarizes the important points from the above discussions:

Model	Land Tenure	Land Registration System	Survey System
Indian Act	First Nation interest is held communally but members may acquire rights to exclusive possession. Non-members may acquire surrendered lands in fee simple or leasehold interests in designated lands	Indian Lands Registry	Canada Lands Survey System
Cree-Naskapi Agreements	Some lands under provincial jurisdiction. Other lands under federal jurisdiction. First Nation has power to deal with Category 1-A and 1-AN lands where First Nation may transfer interests in land or buildings. Interests range from leases to ownership and mortgages (of buildings).	For Category 1-A and 1-AN lands, unique system created under federal legislation. System is a registration of deeds system with parcel indexing.	Category 1-A and 1-AN lands are Canada Lands and thus, Canada Lands Survey System applies, but system has been modified to allow for graphical representations of land and buildings.
Yukon Umbrella Agreements	Title to settlement lands is held by individual first nation group for benefit of its members communally. Permanent interests in surface rights may be conveyed but not in subsurface rights.	The Yukon Land Titles System applies to fee simple lands. The majority of the settlement lands are not explicitly dealt with. The individual First Nations will be able to develop their own systems.	If the lands are Canada Lands, the Canada Lands Surveys System will apply until groups define their own (if they have that power.) If not Canada Lands, the groups may define their own survey systems.
Inuvialuit Agreements	Title to settlement lands in NWT held by Inuvialuit Land Corp. for the benefit of members. Absolute interests cannot be sold except to members or federal government. Lesser interests may be granted to non-members. In Yukon, lands are held by the federal government for the benefit of members.	Land Titles System in NWT and internal systems developed by aboriginal groups.	Canada Lands Survey System.

Sechelt Agreement	Title is vested in First Nation. Lands are no longer governed by Indian Act. The Sechelt have full power to deal with their land. Currently, the Sechelt are granting long term leases to non-members.	First Nation may develop its own system but has not done so to date. Until then, the Indian Lands Registry is being used. Some lands have been placed under the jurisdiction of the British Columbia Land Title Act.	Canada Lands Survey System will apply. Note that if land is placed under BC Land Titles, that system requires BC survey system to be used.
Dene/Metis and Gwich'in Agreements	Settlement lands are to be held by the aboriginal groups communally. For most land, absolute interests cannot be conveyed other than to the crown or a designated aboriginal organization. Lesser interests may be conveyed to anyone.	Land Titles System in Northwest Territories. Note that Shatu Dene may adopt their own system but apparently not Gwich'in	Canada Lands Survey System. Note that Shatu Dene may adopt their own system, but apparently not Gwich'in
Section 53/60 First Nations	Ss. 53 and 60 of Indian Act allow Minister of Indian and Northern Affairs to enter into agreements with individual First Nations that allow them to manage reserve, surrendered and designated lands. The land tenure system remains the same as under the Indian Act.	Indian Lands Registry	Canada Lands Survey System.
Alberta Metis Legislation	Lands granted to Metis General Council to be held communally for benefit of members. Individual members may acquire less than absolute interests including Metis title, provisional Metis title or allotments. Lesser interests may be granted to others. Restrictions exist on subsequent grants.	Governed by unique Metis Settlements Land Registry. System is a registration of titles system which allows for recording or registration of interests.	The Alberta survey system with some changes. Principally, descriptive plans may be prepared by anyone, not just Alberta Land Surveyors.
Nunavut Agreement	Settlement land is conveyed to Designated Inuit Organizations (DIO's) to be held communally for the benefit of members. DIO's cannot transfer absolute interests unless to government. They may convey less than absolute interests. Outpost camps are permitted. Special rules exist for lands in municipalities.	Land Titles system will be adopted by Nunavut Government will apply to entire Territory. Some lands may remain reserves and thus Indian Lands Registry would apply.	Canada Lands Survey System although another may be adopted.

Nisga'a Agreement	Lands will be conveyed to the Nisga'a government and will be held communally for the members of the group. Lands are not governed by the Indian Act. The Nisga'a government may create its own tenure system.	British Columbia Land Title Act applies to some and Nisga'a may opt to make it apply to more. Nisga'a may also adopt their own system.	Unclear if lands are to remain Canada Lands. If so, Canada Lands Survey System will apply, but note that if lands are placed under BC Land Title, that system may demand surveys to be completed under the BC survey system
First Nations Land Management Act and Land Codes	Responsibility for developing tenure system on reserves is transferred to individual First Nations by way of agreements. First Nation must prepare a land code which sets out tenure system.	The Act contemplates the development of new land registration systems by the groups. No specific directions are given. In addition, new system is to be developed by INAC. Details are not yet available.	The Canada Lands Survey System may apply. An individual First Nation might opt for any survey system it choses.
Dogrib Agreement in Principle	Lands held by aboriginal group for benefit of members. Absolute interests may only be conveyed to other government, but lesser interests may be conveyed to anyone	The Northwest Territories Land Titles System, but the group may have power to adopt its own	Canada Lands Survey System, but group may have power to adopt its own system
The Labrador Inuit Agreement	Surface rights and 25% subsurface rights in lands granted to central government which may not sell absolute interests. Lesser interests may be conveyed to anyone.	Unclear. Appears to be provincial registry system but group may have power to create its own system.	Unclear. Appears that provincial survey system will apply, but group may have power to develop its own system.
Report of the Royal Commission on Aboriginal Peoples	Recommends that aboriginal groups be free to choose land tenure systems that are appropriate to their needs and cultures. Communal tenure concept is implicitly supported. No specific recommendations.	No specific recommendations. Groups are free to choose.	No specific recommendations. Groups are free to choose.
Gathering Strength and Policy Statement on Aboriginal Self government	Contemplates transfer of power to determine tenure system to aboriginal groups	Contemplates transfer of power to determine land registration system to aboriginal groups.	Contemplates transfer of power to determine survey system to aboriginal groups.

Stevenson Kellogg Report	No specific comments but recommends review of the concept of the Certificate of Possession	Recommends significant reworking of the Indian Land Registry.	Recommends changes to survey products and requirements for registration.

2.7 Land Tenure, Land Registration and Survey Systems on Non-Aboriginal Lands

The purpose of this section is to set out in brief the land tenure, land registration and survey systems in use on non-aboriginal lands in Canada. This material will serve as a useful contrast for the above sections which have dealt with those systems on aboriginal lands.

Provincial and territorial systems will be examined first (with the exception of the province of Quebec). Then the Quebec systems will be considered. Finally, systems applicable to Crown lands will be reviewed.

2.7.1 Provincial and Territorial Systems

Aboriginal lands may be affected by land registration and/or survey systems that exist in the provinces and territories. This section will examine those systems.

Land Tenure System

The land tenure system applicable to private lands in the provinces (except for Quebec) and territories is based on English common law concepts of property and ownership of rights to it. While it is certainly beyond the scope of this report to explain the complexities of English real property law, some brief consideration of the defining characteristics is appropriate. For a more complete review, see Oosterhoff and Rayner [1985].

Modern English real property law evolved from the feudal system imposed on England by William the Conqueror following the conquest of 1066. Under the feudal system, and in theory, even today, the Monarch is the ultimate owner of all real property. Individuals can only own certain rights to the real property, although after almost one thousand years of evolution of the feudal system, they now include almost all possible rights. The most common form of ownership is fee simple ownership. A fee simple estate is the highest form of ownership and includes the right transfer the fee simple estate *inter vivos* or by will. A fee simple estate will only come to an end when an owner dies without heirs and without disposing of the property by will. In such a case, the property will revert to the Crown by the process of escheat. The owner of any interest in real property may convey the whole interest or any lesser interest to anyone else. Lesser interests may include leases, easements, life estates, mortgages and a host of others. As a result, a number of individuals may own interests in the same property at the same

time. Subject to rules related to planning schemes, real property may be subdivided into smaller parcels.

In summary, land tenure systems based on English common law systems are supportive of individual ownership of significant rights to real property and the ability to convey those rights freely to others.

Land Registration Systems

Land registration systems are discussed in general throughout this report. In Canada, each province and territory has a land registration system designed to support the ownership of private rights to land. These systems are designed and supported by the relevant provincial or territorial governments. They have been categorized above as either registration of deeds systems or registration of title systems.

Survey Systems

Distinct survey systems exist in each province (the territories are covered by the Canada Lands Survey System discussed above.) These survey systems are made up of a number of components including the provincial land surveyor's associations and their standards and processes, government enactments which define such processes as subdivision and infrastructure such as provincial control networks. The systems are primarily numerical in approach, although some systems, like the Alberta system, do allow graphical products.

2.7.2 The Quebec System

The Quebec land registration and survey systems are described briefly here. Quebec's law is based on a civil law system, unlike the rest of Canada which is based on common law [Girard et al, 1989]. The land tenure, land registration and survey systems that exist in Quebec are unique in Canada. As such, they deserve separate consideration in order to determine whether they can provide some insight into the choice of models of land registration and survey systems on aboriginal lands.

Land Tenure

It is certainly well beyond the mandate of this report to attempt to set out all of the detail of the land tenure system as it exists in Quebec. Instead, some general principles will be described followed by a discussion of some particular aspects of the Quebec system as they relate to land registration and survey systems.

Quebec law is based on the civil law system as opposed to the common law system. The civil law system is based on a codification of laws. Thus, the Quebec *Civil Code* is an expression of the bulk of

the law that regulates relationships between citizens, including the law of real property (or immovables as they are described under the *Civil Code*.) In large part, the concepts of ownership of rights to immovables are very similar to those in the rest of Canada. For example, although the finer details of hypothecation under the *Civil Code* may be slightly different from those of mortgaging under the common law system, and the terms are certainly different, the essential concepts of each are remarkably similar. Both the civil law and common law systems support individual ownership of real property and limitations on that ownership imposed voluntarily, or by the state. Of particular interest to this report are differences in approach to the land registration and survey processes that support the Quebec land tenure system. Accordingly, the following material will discuss those specific topics.

Land Registration System

The land registration system used in Quebec is based in large part on an English registration of deeds model with parcel indexing [Girard et al., 1989]. The *Civil Code* specifies that documents that convey interests in immovables must be registered in order to be effective against other claimants to the immovable under competing documents. Priority of documents is established primarily based on their date of registration. The documents are registered against a specific parcel of land. Persons interested in acquiring an interest in a specific parcel may request that the Registrar prepare a certificate of search, which is an official summary of the documents which have been registered against that specific parcel.

A major component of the land registration system is the cadastre. The cadastre is the system which isolates and defines individual parcels so that documents can be registered against them. Although the cadastre has a long history in Quebec, it has many similarities to a modern property mapping system. The cadastre was designed to be a graphical representation of parcels in the province. It was superimposed over the early seigneurial system of land division as well as the later township survey scheme. Individual cadastres were developed for specific administrative units (originally Parishes). The original cadastres were developed by using existing maps, plans and documents, with whatever field surveys were strictly necessary to develop a graphical framework for all of the parcels existing in the administrative unit. Following the development of the original cadastres, subdivisions of the original parcels were to be reflected by changes to the cadastre. Original parcels and all newly subdivided ones were to be assigned a unique identifier number. The cadastres actually comprise two elements, a plan showing the geometrical configuration of each parcel and a book of reference which includes a description of the parcel and identifies the owner. Cadastres can be changed when an error is discovered or by the process of subdivision.

The cadastre is only used to establish a framework for the process of land registration to work within. To clarify, documents are registered against the parcels that they affect. It is the cadastre which is used to define which parcel a document affects. The cadastre cannot be used to determine with precision the actual boundaries on the ground of a particular parcel - that process is accomplished by the survey system.

The cadastral system in Quebec is presently undergoing major reform. The maintenance of the original cadastral plans had been piecemeal and many subdivisions had not been depicted on the original plans. In addition, many of the cadastral plans did not accurately reflect the boundaries which actually existed on the ground. As a result, the Government of Quebec began a major cadastral reform project in 1992. The three main objectives of this reform were stated as follows [after Quebec, 1999]:

> To include all parcels in the cadastre and to correct positional errors in the existing cadastral plans.
>
> To develop a method for continuous updating of the cadastre.
>
> To support integration of the cadastral information with many other geomatics uses.

The project is designed to be self-financing, based on the assessment of user charges imposed when plans or documents are registered and from the sale of cadastral products by the government. The cost of the program was budgeted to be in the range of 500 million dollars, with most of the work to be carried out by the private sector.

Survey System

The Quebec survey system has many similarities to those in the rest of the provinces. The land surveying professional group (*Ordre des Arpentures-geometres du Quebec*) is self-regulating, although perhaps with less autonomy than other provinces [Dobbin, 1999]. The *Ordre* imposes standards on its members as do other provincial associations. The various levels of government also impose survey standards for some products, as is also common in other provinces.

The system is primarily a numerical system, as opposed to a graphical one, that is, the definition of parcels on the ground is principally supported by traditional field surveys and monumentation.

One significant difference between the Quebec survey system and those of other provinces is the role of the land surveyor. Under the Quebec survey system, the land surveyor takes on a much more official role than in other provinces [Girard et al., 1989]. The process of boundary adjudication (*bornage*) can be accomplished under the supervision of a court or, more commonly, by agreement between the adjoining proprietors. A land owner may force a neighbour to participate in the settlement of a boundary and to contribute to the cost of that settlement. The land surveyor acts under the authority of the agreement between the land owners or under the direction of the court. The surveyor assesses all available evidence, including examination of witnesses. The surveyor may take account of possession and prescription. The surveyor's final determination of the proper location of the boundary is documented and, if both parties agree, demarcated. If agreement between the parties cannot be reached, the courts may make a final determination.

2.7.3 Crown Lands Systems

In both the provinces and the territories large tracts of land may not have been granted by the Crown. Crown ownership may also apply to significant subsurface rights. Distinct land tenure, land registration and survey systems apply to these Crown lands.

Land Tenure Systems

The Crown often wishes to convey less than fee simple ownership to the lands or subsurface rights that it holds. In these cases, a significantly different land tenure system will apply than that applied to privately held lands. That system will be based on lesser interests than fee simple, typically leasehold or licence interests. Individuals may be granted these limited rights to Crown lands and eventually, those rights will end and the Crown will be left owning all the rights to the land.

Land Registration Systems

A purchaser of rights in Crown lands understandably has less concern with the issue of the quality of the title being purchased. After all, the vendor is the Crown and if some difficulty is discovered with the title to the land, the purchaser may expect to be compensated. Typically then, there is no distinct land registration system in place which covers Crown lands. Instead, the Crown simply maintains internal records of what lands are affected by what rights. Such systems do not have the rigour of a conventional land registration system in that there is generally no defined methodology for determining who owns what rights in what land. Instead, the records maintained by the Crown must be relied upon.

Survey Systems

Survey systems applicable to Crown lands in the Provinces are generally defined by provincial governments. There are generally distinct products required by the tenure system and different standards that are imposed on the preparation of those products.

2.8 Conclusions

More recent models reviewed above indicate a greater willingness on the part of the federal government to allow aboriginal groups to define their own land tenure systems (within limits) and to establish their own infrastructure in support of these tenure systems. Without question, aboriginal groups will acquire more control over many of the governance functions that affect them. Certainly, control over land and land related processes will be among those functions that will be assumed by the aboriginal groups.

Land registration and survey systems have received little specific attention to date in the literature related to aboriginal land management issues. Where they are mentioned, the context is typically related to delays which appear to be created by the administration of the systems, not the systems themselves.

Most land registration systems which have been created by the federal government have been registration of deeds systems.

There appears to be a trend toward aboriginal groups adopting the provincial/territorial land registration systems. This can be seen in the Sechelt and Nisga'a agreements as well as in many agreements in the territories and more recently in the Labrador Inuit settlement.

Even though many aboriginal groups now have the jurisdictional power to implement land registration and survey systems of their own design, none have yet to do so. This is probably a result of the significant amount of effort and financial resources which would be necessary to design and implement such systems.

As reserves south of 60 are removed from under the provisions of the *Indian Act* they may lose status as Canada Lands. In some cases, such lands have been explicitly added to the definition of Canada Lands under the *Canada Lands Surveys Act*. On a similar note, aboriginal lands in the territories may or may not retain the status of Canada Lands following a land claims settlement. The loss or retention of status as Canada Lands may have profound impacts on the responsibilities of the parties to agreements. The agreements must in each case be clear as to what the parties intend and that the status of the lands matches that intent.

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Chapter 3

International Research

3.1 Introduction

This chapter deals with land tenure, land registration and survey systems as they are found internationally. Particular attention is paid to recent titling projects and systems applicable to developing regions. This approach best reflects the situation in which Canadian aboriginal peoples now find themselves.

The chapter is organized as follows:

- The New Zealand experience;
- South African regional experience;
- Thailand land titling project;
- The Namibian experience
- Regional comparisons;
- American Indian land tenure; and
- Exemplars and cautionary tales - a summary

3.2 The New Zealand Experience

3.2.1 Flexibility in Titling and Registration of Land in New Zealand

Flexibility in dealings with land in New Zealand will be considered from three perspectives: from within land claims settlement with the Maori, from the new Survey Regulations passed in 1998, and from the Land Transfer Act.

3.2.2 Nohoanga

The Ngai Tahu Claims Settlement Act 1998 introduced a new form of land tenure in New Zealand to recognize some of the traditional land use rights of the Ngai Tahu people of the South Island. The legislation creates Nohoanga (temporary fishing and camping sites) Entitlements that provide the Ngai Tahu the right to occupy some 72 specified sites (generally consisting of less than one hectare) for camping purposes for up to 210 days a year. The rights are for a period of 10 years, with a right of renewal option for a further 10 years. The sites can only be created over Crown land, and are

restricted from being placed over National Parks, and defined strips and reserves located within 20 metres of a waterway.

The Nohoanga sites must be defined by an existing survey plan or by a new survey that meets the standards agreed to between the Surveyor-General and the land holding agency. The standards that are required for these surveys are no different than any other survey. These standards are defined under the older survey regulations (1972) and fall under the rural designation (class B) since these aren't in urban areas and are less than 4 hectares. The plans must be submitted as SO plans (as a Nohoanga Entitlement) and be approved by the relevant Chief Surveyor. The areas will be gazetted and recorded in the DCDB, but will not be recorded in the Land Transfer records.

The surveys completed to date have been on Crown land, as expected, and consist of land for which: some has no title, some has title in the Queen, some has Gazette notice references, and some are in dry riverbeds where the Crown owns the upland and hence the dry bed is shown as Crown land. None of the surveys actually abut water, so there is no conflict with the requirement to maintain public access to the water.

Responsibility for the completion of these surveys falls to the Crown and it also falls to them to ensure that the rights defined in the Entitlement Grant (effectively the licence to occupy) are registered on any title that may exist for that parcel (though many of the parcels in question may have no title associated with them at present).

Essentially, the Ngai Tahu Claims Settlement Act makes special provisions for some planning procedures. However, any survey that is completed (in terms of measurement requirements and plan preparation) is controlled by the Survey Regulations. There are no exceptions or variations for Maori land.

3.2.3 Survey Regulations 1998

The new Survey Regulations provide four classes of survey: Class I – urban or commercial, industrial, or residential; Class II – rural and not commercial, industrial or residential and less than 4 hectares in size; Class III – rural and not commercial industrial or residential and greater than 4 hectares in size; and Class IV – exemptions from II and III surveys at the discretion of the Chief Surveyor only.

Each of these classes of survey has tolerances and requirements that must be met. Note that the Nohoanga sites defined as Class B surveys under the old regulations would now fall in Class II. The distinction between classes lies in the requirements for witness marking, accuracy in tolerances and monumentation. Section 13 of the Regulations deals with witness marks and the maximum distance these may be placed from a boundary mark or natural boundary. In urban sites, a witness mark may not be more than 125 metres from a boundary mark, but a Class II site would only require it be within 250 metres. Tolerances within boundary point to boundary point are also more restrictive in an urban

setting (0.03 + 0.01/100) over that for Class II rural settings (0.1 + 0.01/100). Essentially, greater accuracy is required in urban settings.

Finally, monumentation is required for all primary parcel boundaries and must be placed at all bends, curves, intersections, and adequately spaced along straight lines to allow users on the ground to identify the boundary adequately. It is noted however that the Chief Surveyor may authorize for Class II and III boundary surveys that if the boundary is irregular, then boundary monumentation may be indicated by a Definite Feature. This is a reasonably permanent physical feature that is clearly defined in itself, is easily identified and is easily defined. Examples include buildings, walls and fences but does not include natural boundaries such as rivers, streams or shorelines.

Hence, under Class II (formerly Class B) the requirements for survey are more flexible than that found in urban settings. But as previously stated, the requirements are consistent throughout the cadastral system.

3.2.4 Land Transfer Act

Part XII of the Land Transfer Act introduced the compulsory registration of titles that requires all private general land or land alienated from the Crown for an estate in fee simple and not already subject to the act, to be brought under the Act as soon as may be. This does not apply to land for which Maori title had not been extinguished.

For land that the Registrar is satisfied that an applicant is in possession of the land and that the boundaries are sufficiently defined by instruments of title or by deposited plans, an ordinary certificate of title will be issued. However, a certificate of title may be limited either as to description of parcels or as to title, or both, if insufficient information is available to adequately define the parcel.

A limit as to parcels restricts the registered proprietor of land from seeking recovery of damages against the Crown by reason of an error or omission in the description of the parcel of land comprised in that certificate of title. For a certificate of title issued with "limited as to title", the title for that land remains indefeasible only against the person named on the original limited certificate of title. However, after the expiration of 12 years, any claim, estate or interest in the land not registered on the certificate of title for that land becomes barred and extinguished.

3.3 The South African Regional Experience

There has been some significant research done on the boundaries of informal and traditional settlements in many parts of Africa. In both Zimbabwe and South Africa efforts are being made to grant formal property rights and infrastructure to informal settlements, which are the home to some eight million people in South Africa alone (about 20% of the population). In summary, anecdotal evidence from the

Urban Sector Network in Natal suggests that families want visible boundary monuments, whether put in by surveyors or not.

A study of 102 families living in informal settlements in Cape Town assumed that attitudes to statutory boundaries is an easily measured indicator in newer settlements. It found that those who knew of the presence and location of boundary monuments were "fiercely protective" of their space and of their boundaries (Barry & Mason, 1997). In a newer settlement in which all boundaries were demarcated with stone monuments, 98% of the respondents would tolerate no encroachments. On the other hand, respondents in areas in which there were no monuments were amenable to "reorganising" their boundaries, in light of minor encroachments over the boundaries. Thus the Cape Town study concluded that the exact locations of structures in informal settlements is of little real concern to residents, provided that they do not diminish the spatial extent of other rights. However, in the formal site, boundary monuments were "sacrosanct" insofar as they were visible to the residents.

The desire for visible monuments even in informal settlements was supported with evidence from Natal. Labour tenants who had been evicted from commercial farms near Pietermaritzburg established a settlement through land invasion. In so doing, the community staked out plots on the vacant ground, and the boundary beacons remained visible, above the ground (Jackson, 1997). A final bit of evidence comes from research into the boundaries of an older, established settlement in Zimbabwe (Goodwin & Regedzai, 1997). In a High Density Developed Township (HDDT), the views of 47 land owners were sought as to how their boundaries were marked. It found that physical boundaries markers were placed by the residents in a very short time - two-thirds of the boundaries were marked within seven years of settlement and 90% of the boundaries were marked within 17 years. More significantly, residents preferred fences - 63% of the boundaries were so marked, with hedges (16%) being next most favoured.

Elsewhere in Africa, there is much evidence that people in the rural sector prefer that boundaries of field and village plots be marked with physical features. In the Kikuyu area of Kenya, trees were commonly used to demarcate the boundaries of sub-clan (mbari) lands, and the gitoka lily was used to mark out the boundaries of smaller land units (githaka). Indeed, "it was really the process of demarcation which eventually confirmed the use of trees in clarifying rights of land tenure" (Dewees, 1995). Anecdotal evidence from Chad suggests that rural parcels of land were bounded by neither survey monuments nor coordinates. Although such physical features as the edge of a peanut field were imprecise, they were mutually agreed-upon. The location of the boundary might vary with time; however, agreement as to its location and character did not vary.

3.4 The Thailand Titling Project

3.4.1 Background

Thailand covers an area of approximately 51.4 million ha, of which approximately 50% is suitable for agriculture. In the early eighties it was estimated that only 12% of Thailand's occupied agricultural land had been brought into the existing Land Title system.

Historically all land belonged to the King, however as land was readily available Thai Nationals could claim rights to land in order to provide for their family. As such, rights to use and occupy land were usually customary with few or no official records. At the beginning of the twentieth century Thailand adopted the "Torrens" system of land tenure based on the Australian model.

In 1954 the Land Code was enacted and remains today the basis for land rights in Thailand. However there where a number of difficulties that arose in the administration of land over the next 30 years. The survey system was fragmented into 29 regions each with their own mapping system. As a result, inconsistencies existed in the geodetic control. Administration of surveys was compounded by massive growth during this period and survey information could not be created, nor maintained, to meet the needs of the rapidly expanding land development industry. The lack of technical resources meant that the Department of Lands (the custodian of land registration documents) could not meet the demands of the public for cadastral mapping, which resulted in the waiver of field surveys prior to the issue of title.

The administration of titles was also weighed down with complexity. Various types of interest in land where held by different organisations, and, as with numerous Asian countries, land registration information was in general not public information.

Land titling has been driven by Thailand's concerns over land tenure and agricultural productivity. In 1980 they established a policy to increase the issue of Title Deeds on the understanding that agricultural productivity would be increased which in turn would alleviate rural poverty. However the national land-titling project would have taken over one hundred years to complete at the time.

In 1984 Thailand commenced a 20-year land-titling program. The objective of which, was to provide secure tenure to land holders (Title Deeds), accelerate the issue of land titles, improve the technology and efficiency of cadastral map production, strengthen land administration and improve land valuation systems for taxation purposes.

3.4.2 The Land Code 1954

The Land Code defines five levels of rights in land. The type of title issued differentiates security of title. Quality of title is determined by the history of occupation and use of a block of land. Table 1 summarises the five levels of title, their legal status, survey methodology used to define parcels and types of restrictions that are or can be applied to a title.

Table 1 - Land Titles Issued under Land Code 1954

Document	Class	Legal Status	Survey Method	Transfer Rights	Used as Collateral	Restrictions
NS-4	Title Deed	Most Secure; full, unrestricted ownership of title registered with provincial land registrar	Land demarcated by accurate ground survey or ortho-photography, property clearly identified with boundary markers	Fully negotiable.	Yes	Issued only for land outside forest reserves; ownership rights can be challenged by state or other farmers if land lies fallow longer than 10 years.
NS-3	Certificate of Use	Secure; enables farmer to sell, transfer, or mortgage land; can be converted to title deed (NS-4)	Surveyed in isolation by triangle, tape method.	Because of boundary distortions, proposed transfers must be advertised for 30 days	Yes	Issued only for land outside forest reserves; ownership rights can be challenged if land lies fallow for more than 5 years
NS-3K	Exploitation Testimonial	Secure; enables farmer to sell, transfer, or mortgage land; can be converted to title deed (NS-4)	Prepared from unrectified aerial photography	Fully negotiable	Yes	Issued only for land outside forest reserves; ownership rights can be challenged if land lies fallow for more than 5 years
NS-2	Pre-emptive certificate	Authorises temporary occupation of land; after prescribed period and land use, can convert to NS-3 or NS-3K	Land described by metes and bounds	Only by inheritance	No	Issued only for land outside forest reserves; validity of rights conditional on use within 6 months of issuance
SK-1	Claim Certificate	Claim to ownership based on possession or use before enactment of the Land Code; can be converted to NS-3, NS-3K or NS-4	Land described by metes and bounds	Certificate transferable, after transfer advertised	No	Issued only for land outside forest reserves;

A Title Deed (NS-4) is the most secure form of title in Thailand. The title allows the owner to sell, transfer and mortgage the land without restriction. Prior to the Land Titling Project, boundary monuments were required to be placed by a survey before title to land could be issued. Survey methodologies ranged from the use of theodolite and chain, to total stations to orthophotography in more remote areas.

Certificates of Use or Exploitation Testimonials (NS-3 and NS-3K) can be issued provided the occupier has maintained possession of the land for a prescribed period. These lands are generally defined by less accurate survey methods such as by plane table or unrectified aerial photography. These forms of title can be upgraded to Title Deeds. The primary difference between these certificates and a Title Deed is the method of Survey. Both NS3 and NS3K certificates are being converted to title deeds under the Land Titling Project.

A Pre-emptive Certificate (NS-2) allows occupation of land that is described by metes and bounds. This form of title can only be transferred by inheritance.

A Claim Certificate (SK-1) was a late addition to the Land Code. It allowed occupiers to (within a specified time frame) make a claim for the land if they had made use of it prior to 1954. Over time and with continued occupation this certificate could be converted to a Title Deed.

3.4.3 Land Titling

The land titling process commenced with the mapping of both rural and urban areas by ground and aerial survey methods. During Phase I approximately 4,000 maps per year at 1:4,000 where produced for rural areas. This was increased to 6,000 maps per year during phase II. Twenty-six provincial cities where also mapped at a scale of 1:1,000.

The land titling process consisted of three major processes:

- Adjudication;
- Conversion; and
- Transformation.

Adjudication

This was the process of converting NS-3 certificates and lesser documents to Title Deeds. The extent of individual parcels of occupation where defined on the ground. Definition of boundaries required reaching agreement with village authorities and neighbours of the parcel holders to ensure stated boundary locations were genuine. Upon agreement concrete boundary markers where placed and either surveyed or located on orthophotography.

Conversion

Conversion was the route used to issue Title Deeds to landholders with NS-3K certificates without adjudication or field survey. This process was primarily administrative and technical in nature. Existing NS-3K maps where transformed onto orthophotography from which Title Deeds could be drawn. Approximately 960,000 NS-3K certificates will be converted on completion of the project.

Transformation

Transformation consisted of mapping old Title Deed maps onto a common spatial network that was implemented at the commencement of the project. Titles were often redrawn to reflect the transformation and issued with new identifiers.

3.4.4 Benefits and Social Impact

Numerous international bodies have discussed the socio-economic aspects of cadastral reform. Notably, the 1989 World Development Report on Financial Systems (World Bank, 1989) states that:

> The legal recognition of property rights - that is, rights of exclusive use and control over particular resources - gives owners incentives to use resources efficiently. Without the right to exclude others from their land, farmers do not have an incentive to plough, sow, weed, and harvest. Without land tenure, they have no incentive to invest in irrigation or other improvements that would repay the investment over time. Efficiency can be further served by making property rights transferable. (p86)

The Report goes on to argue that cadastral systems, which permit mortgages over land, provide security, which in turn creates productivity and wealth:

> The assignment and transferability of property rights promotes economic efficiency directly by creating new incentives....They do this by allowing borrowers to offer security in the form of mortgages over real estate or other collateral....When taking collateral, the lender is mainly interested in the efficient transfer of property rights,...Mortgages over land and other real estate are therefore one of the best forms of collateral. In most countries real estate accounts for between half and three-quarters of national wealth. If ownership is widely dispersed, tenure is secure, and title transfer is easy, real estate can be good collateral for nearly any type of lending. Unfortunately, these conditions are not always met in developing countries. Land distribution is often skewed, tenure (if any) insecure, and title transfer cumbersome. One key to a smoothly functioning system of land tenure is land registers supported by cadastral surveys. In many developing countries these are still woefully inadequate or missing altogether. (p87)

The Bogor Declaration resulting from the United Nations Interregional Meeting of Experts on the Cadastre, (Bogor, Indonesia, March, 1996) states:

> The formalisation of rights in land, which are an integral component of an effective cadastral system, is very important for sustainable economic development and environmental management in both urban and rural areas.

These statements are supported by socio-economic surveys that were undertaken during phase I (1984-1986) and II (1990-1991) of the Thailand Land Titling Project. The studies showed that the major incentive for obtaining land title was the increased demand for and access to institutional credit. Landowners with Title Deeds could increase there borrowing power by about 27%. The case studies also indicated that the number of medium and long-term loans in the project areas increased by 20%. Finally, borrowers providing land collaterals received 75%-123% more institutional credit than those without.

Farmers with land titles, compared to those without, tended to spend more on improvements to their land by 37%-100% (fertilizer, seed, labour, etc.), they tended to farm more intensively by 10%-30% and produce higher valued product by 8%-27%.

The studies concluded, "legal title is the most significant factor in explaining the differences in land prices. Title-equivalent land was between 75%-192% more valuable than undocumented land, and between 113%-195% more valuable than state land occupied by squatters"[1]

Other factors that came out of the studies showed that titled land is easier to buy and sell, the titling of land has led to an increase in cultivated land, and there has been a significant increase in government revenues as a result of property and transfer taxes.

An unexpected result of the studies showed that the security of tenure was not a major consideration for Thai farmers as they considered tenure security to already be relatively high. However it has been noted that in northern and north-eastern regions of Thailand titling of land has minimised the number of land disputes.[2]

Analysis of surveys carried out by the Office of Agricultural Economics of the Ministry of Agriculture for the 1991/92 and 1995/96 crop years showed that the use of credit has continued to increase more rapidly in areas that have been titled than those that have not. The surveys indicate that the positive impact of titling found in the earlier studies has continued although the surveys suggest that the full effect of titling on credit use is not immediate.

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[1] World Bank Report No. 12866-TH - Staff Appraisal Report - Thailand Land Titling III Project - August 30, 1994, Agricultural and Natural Resources Operations Division - Country Department - East Asia and Pacific Regional Office.
[2] Onchan, T., and Aungsumalin, S,. 1993. "Socio-Economic Evaluation of the Land Titling Project." Bangkok: Kasetsart University, Centre for Applied Economic Research.

Lastly the perceived benefit of obtaining title to land continue to remain strong. Some 34,000 farmers have been willing to pay up to five times the standard titling fee in order to receive title a few years sooner than they would otherwise have done.[3]

3.4.5 Obstacles to Overcome

Major areas of difficulty that have been encountered were a result of overlapping Governmental jurisdictions and a lack of communication, coordination and/or consideration between Departments.

Coordination of activities with little prior knowledge of the extent of work/number of parcels to be surveyed often meant there where delays in the issue of titles. Delays also arose when the landholders did not participate in the adjudication process, or because of difficulties found in some of the lesser title documents, e.g., unregistered mortgages.

The extent of Forestry Reserves where often difficult to determine which meant that a buffer zone was required to be left until there was a chance for the Department of Lands and the Department of Forestry to come to agreement on the boundary location. This has resulted in a number of areas that have been unable to be completed.

3.4.6 Reasons for Success

In 1997 the Thailand Titling Project was given an Award of Excellence by the World Bank. For a Land Titling project this was considered a rare achievement as numerous projects have been inflicted by problems that have seriously held back their performance (9 of 12 projects reviewed in 1992 by the World Bank[4]). These problems have generally fallen into the following groups: a lack of political support; conflicting priorities; unwillingness to commit adequate resources; and underestimation of the complexity and/or cost of a project during design.

Factors contributing to the success of the Thailand Land Titling Project included the following:

The project has not been fragmented by a number of differing and/or conflicting goals; the objective has been to provide secure title to landholders. This goal has actively supported by the Department of Lands, who had a reasonable understanding of the problems faced by the project prior to commencement and was already running a reasonably efficient administration. Finally, and maybe most importantly, support from successive political administrations has been maintained, as has substantial foreign aid from the World Bank and Australia.

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[3] Supra, note 2.
[4] Wachter, D., and English, J., (1992) The World Bank's Experience with rural land titling. Divisional Paper number 1992-35. Policy and Research Division, Environmental Department, World Bank.

3.4.7 Conclusion

The objectives of the project have and are being met. The results of these efforts have been positive in terms of alleviating rural poverty. Agricultural production has increased although overall GDP has yet to reflect this (-8.5% for 1998 est. [5]).

The importance of Governmental support for the duration of a titling project cannot be over emphasised nor can the development of a Project Plan that clearly defines the project objectives, constraints and responsibilities.

As with any cadastral survey the process of boundary determination must involve all interested parties so as to avoid the potential for dispute at a later date. However as evidenced by the Thailand project the survey methods employed need not be of the highest order. Field practices should be designed to capture the appropriate data at a cost and accuracy that reflects the needs of the landholder and the form of title being issued.

Land titling programs can bring important benefits, but they do not always do so, and even when they do the benefits may not be sufficient to justify the costs involved. Therefore, a thorough analysis of the benefits of a project must be assessed prior to implementation to ensure that the benefits of titling are appropriate and that costs can and will be recovered.

[5] The World Fact Book 1999, http://www.cia.gov/cia/publications/factbook/th.html#econ

3.5 The Namibian Experience

The Namibian government wishes to deal with the unregistered interests in land in communal areas ("informal settlements") whether urban or rural, and to formalize land rights amongst those migrating to urban centres. The growth in urban population is of great concern, averaging 3.75% on average and ranging as high as 6.5% in the fastest-growing towns. Customary landholders living on the fringes of these growing urban centres are uncertain about the status of their rights in the face of the encroaching population. A main thrust is to expand the established land titling program, which has benefited urban areas, into rural areas where survey and title uncertainties frustrate investment and development. While the existing land registration system is rigorous and dependable, it is unnecessarily bureaucratic, slow and expensive. The proposed model appears to meet the need to improve the efficiency of procedures for land registration and to simplify its operation.

Prior to independence, land in the former *homelands* was held communally, with the granting of individual (often user) rights controlled by traditional leaders. Upon the demise of individual users, the (unregistered) land rights would revert to the leader. In contrast, the modern constitutional basis of landholding is Article 16 of the Namibian Constitution, which provides that all Namibians have "the right to acquire, own and dispose of...property individually or in association with others and to bequeath their property to their heirs or legatees..." The government's 1991 National Housing Policy operates as a social guarantee to its citizens of the right to usable land and acceptable shelter in a suitable location.

The proposed system of property rights is based on the following principles:

- security of tenure is essential
- precise measurement is secondary
- the system must be cheap to operate and adaptable to local and changing conditions
- flexibility, in terms of procedures and the opportunities to hold land, is essential
- operation of a parallel levels of title
- the possibility of upgrading title from one level to another

Following on this last point, flexible survey standards are also contemplated, in addition to a simplified 'user-friendly' land registration system. Much of the survey work for defining limited interests is proposed to be done by land measurers trained to achieve the required level of accuracy with simple techniques. Registered land surveyors would not be required for simple property definition tasks. The work of the land measurer would be verified by the land administration.

To accommodate the variations in conceptions of property that exist within Namibia, three types of title are contemplated under the new regime of property rights: starter, landhold, and freehold title. To communally-minded folk, the maintenance of land ownership in the family line is paramount. By providing a vehicle for this, the system thus makes an effort to adapt to the custom rather than have the customary practice conform to a registration regime rooted in other cultural norms. Freehold title, as

the only option for ownership, does not meet the needs of the population. The types of tenure are described briefly below.

Starter Title

Starter title is to be granted as part of a block of land housing up to 100 families, where the underlying title (*freehold*) is held by a local authority, a private developer, a community organization or a non-governmental organization. Starter title:

- includes the right to *occupy* land
- includes the right to dispose of the property to others
- is owned in perpetuity
- is hereditable (by testate or intestate means)
- is subject to regulation by the constitution (if any), or local custom, governing land use in the area
- is 'transportable;' i.e., the tenure holder can occupy an alternative parcel if the selected one is unavailable due to planning or development concerns, etc.
- does not attach to a specific parcel within the block but, rather, the right to hold a block of unspecified location
- presumes the full survey of the exterior boundary of the block
- is recorded, along with the underlying title, in the local property office
- entails simple registration procedures which allow tenure holders to prepare their own documents with the assistance of property office staff
- does not allow the registration of mortgages
- allows the construction of a building upon approval of a layout plan

Landhold Title

Landhold title is similar to starter title, except that it attaches to a defined site and does not consist of use rights with a larger block of parcels as under starter title. Landhold title:

- affords a greater degree of security than starter title
- allows the occupant to transfer, mortgage or sell rights in the land
- is based on a cadastral map prepared by a land measurer (survey technologist)
- is recorded in the local property office according to simplified procedures

It is possible to upgrade from starter to landhold title. However, this can be done only en masse; i.e., the conversion to landhold title must be approved by the entire group of starter title holders. Likewise, a landhold title can be converted into freehold title only after a full investigation of the title and boundaries to resolve any ambiguities or disputes. An adjudication procedure is specified, and provides for the use of local expertise in resolving disputes.

References:

Report on a Flexible Land Tenure System for Namibia. Christensen, SF and PD Hojgaard, Ministry of Lands, Resettlement and Rehabilitation, February, 1997

3.6 An Inter-Regional Comparison of Rural Reforms

3.6.1 Introduction

The study focuses only on rural reforms and analyses the experiences in three regions (South America, Eastern Europe and French West Africa) to determine which types of reform work, which do not, and to examine the reasons for the successes or failures. Within the context of land tenure reform, the success of each country and region's cadastral reform is evaluated against the following purposes:

- To consolidate and register customary tenure
- To increase security of tenure
- To promote improvements to land
- To enhance access to credit
- To stimulate a viable land market
- To reduce land disputes
- To increase agricultural production
- To reduce the incidence of uneconomical fragmented parcels
- To promote the conservation of natural resources

3.6.2 Land Tenure and Cadastral Reform

The goal of reform in rural areas is to increase agricultural production and to, therefore, stimulate economic growth. The mechanism by which granting and registering title (*titling*) to agricultural holdings of peasants, has been described (Stanfield, 1985 per Dorner, 1992) in four stages:

- A secure title enables the farmer to use the land as collateral for securing loans from financial institutions.
- A secure title provides farmers with incentives to invest in their farms by increasing the probability that the capital they accumulate will provide them with future benefits.
- With this combination of increased *ability* to secure operational and long-term capital and the farmer's increased *incentive* to use this capital in the farm enterprise, farmers with secure title will actually increase their long-term capital investments as well as their purchase of production inputs.
- With higher investments and greater use of production inputs, the value of production per hectare will be higher for the holdings with secure title than for those without such title.

In application, the reform generally modifies a traditional tenure system under the supposition that customary tenure systems inhibit economic growth: "Traditional land tenure arrangements in third world countries are often cited as one of the major constraints against effective long-term rural development" (Barnes, 1985). Commonly, a certain amount of ambiguity occurs when new laws are imposed on a society which has functioned under the customary system for hundreds or sometimes thousands of years. People are uncertain as to how the new laws will actually be implemented and there are many

cases, as will be seen in the following sections, where reforms are not implemented at all. Implementing a new regime of land laws is extremely expensive, time-consuming and politically sensitive; most developing countries do not have the resources to see this implementation to fruition.

3.6.3 South America - Regional Comparison

In Peru, the attempts at rural collectivization did not achieve the desired results. The failure was not necessarily due to collectivization itself, although it decreased the incentive for farmers to work hard. The reform also failed to facilitate access to credit and to provide agricultural assistance in all areas, although some did benefit from it. In fairness, other factors contributing to the failure of collectivization included the macroeconomic effects of a world recession, the lack of implementation of reform in the highlands, corruption and guerilla warfare. It did, however, provide peasants with access to land, as most of the country came to be owned by collective units.

On the other hand, decollectivization in Peru increased work incentive, ensured optimal use of land and improved access to markets. Privatization in rural Peru had mixed results. Although it did not encourage the development of the land market, since land transactions continued to occur informally, it did facilitate access to credit by eliminating the restrictions imposed by having a single bank, demonstrating that informal transactions and credit arrangements can succeed without government intervention. Privatization succeeded in redistributing and providing access to land, but also encouraged parcel fragmentation.

Titling and registration have not found success because of the sheer size of the problem, the increase in land disputes, corruption, the slow process and its cost. It has not been demonstrated that titling and registsration have improved security of tenure. It has been proposed that local community involvement would improve this situation and that titling could contribute to reducing deforestation and coca production.

In Colombia, land redistribution actually served to increase violence, since the recognition of the land rights of sharecroppers and tenants increased land disputes and provoked landowners to evict them. The government's lack of dedication to reform can be partly blamed for this and for the overall incompleteness of the effort. Incomplete implementation resulted in inadequate credit and technical assistance, and the absence of infrastructure and social services. Sharecropping, on the other hand, has succeeded in relieving the tension caused by the fear of expropriation. It also provided peasants with access to land, increased productivity, and promoted improvements to the land.

The development of the land market and economic support has led to mixed results in Colombia. Although the government has facilitated access to land through subsidies, it has not succeeded in redistributing land and lowering land concentration. Violence continues to plague further land redistribution through INCORA.

Peru has been more ambitious than Colombia in the pursuit of land reform. In both cases, however, land redistribution failed, for different reasons. In Peru this failure occurred mainly due to low agricultural productivity, restriction of the sources of credit and limited application in the sierra. In Colombia, reforms failed because of violence and the lack of government dedication.

In both countries, and especially in Colombia, it was found that the shift to sharecropping was an effective method of land tenure reform. The development of the land market and its role in land redistribution, however, is dependent on many factors and not simply on land tenure or the cadastre. In Peru, the informal market seems to prevail and the recognition of informal arrangements is effective. In both countries, *minifundismo* (where the prevalent parcels are too small to provide subsistence) is still common and restricts productivity and, therefore, value of land. In both countries, computerised land information systems have been implemented to facilitate and improve titling and registration. Titling and registration have not yet achieved success in Peru and are only starting in Colombia.

3.6.4 Eastern Europe - Regional Comparison

The analysis between Hungary and Albania is aided by the fact that, through the process of establishing a market-oriented economy, both have undergone similar privatization and compensation programs and both are attempting to implement cadastral reforms. As well, these reform programs have been implemented over relatively the same time period. Both countries are utilising the assistance of foreign agencies and foreign funding. Although many factors surrounding the land tenure and cadastral reforms are similar, there seem to be great differences in the purposes and successes of each country in implementing these reforms.

An overview of East Central European and Former Soviet Union countries in mid-1996 ranked Hungary as the leading nation, in term of various transitional tasks such as market liberalisation, land reform, the privatization of services, rural finance and institutional framework. The shock-therapy method of decollectivization implemented in Albania resulted in an extremely unstable agricultural environment. Although Albania has experienced an impressive growth in Gross Agricultural Output (GAO) of 70% over the first few years of reform (1991-95), the high level of fragmented land holdings created from these same reforms will likely hamper future growth and sustainable productivity (Cungu and Swinnen, 1997). The political instability and violent insurrection in Albania in recent years has forced the governments and organisations to abandon, at least temporarily, attempts to complete the land reform process.

Hungarian GAO has decreased by 30% over the same period of time (1991-1995). The gradual and moderate process of land reform in Hungary has not resulted in immediate increases in production. However, the relative political stability and somewhat developed economy will likely result in future increases in agricultural productivity. These factors, when combined with the consolidation of fragmented lands and a developing land market, should promote the successful development of larger-

scale farms. It is these large-scale farms that will enable the Hungarian economy to participate in world markets (Csaki and Lerman, 1997).

The reforms in Albania and Hungary both involve the privatization of formerly state-owned land and the redistribution and compensation of land to former landowners. While the processes of privatising the land may be very similar, the post-privatization attitudes of the landowners seem to be quite different. In Albania, there appears to be a greater uncertainty of individual rights in the land despite the major objective of the reforms being to establish a sense of security in the registration programs. The major problem in Hungary seems to be managing the land transactions and trying to reduce the backlog in registration of title.

The objectives of the programs underway in Hungary are more advanced technologically than those in Albania. The country-wide local area network connecting Hungarian District Land Offices would not be possible in Albania, given the unreliability of electrical power.

Although the reforms underway in Albania do contain future plans for the creation of Geographic Information Systems and automated databases, the main concerns are establishing the security of title. Land tenure and cadastral reforms in Albania and Hungary have different objectives and face different problems due to the set of exogenous factors surrounding the political and economical state of the countries. Hungary's comparative stability has permitted, for example, the growth of management systems such as the IPRS while Albania's immediate needs are more basic.

3.6.5 French West Africa - Regional Comparison

From the work done on Burkina Faso and Senegal we can extract certain common themes as well as differences in their tenure and cadastral reform. Both countries have attempted to use titling and registration with very little success. The main difference, however, is that Senegal began titling and registration in the colonial years and then moved away from this concept at independence. On the other hand, Burkina Faso has only recently begun to use titling and registration in an attempt to increase private investment in the agricultural sector. In both countries the vast majority of land belongs to the state and regional committees have been created to resolve rural tenure issues. Furthermore, empirical data suggests that tenure reforms, usually attempting to dissolve customary tenure systems, have only succeeded in decreasing security of tenure. Within both countries a major source of this insecurity has been due to ambiguity created through incomplete implementation and enforcement of newly created laws reforming tenure.

Following formal registration, security of tenure has not been increased because of disagreements created among co-proprietors and deadly disputes among family members. Some people found that a few powerful groups would be able to acquire their land given the new laws. "Even in those areas where land is registered, customary law in fact continues to govern the way in which most people deal with their land, making tenure rights ambiguous." (Barrows and Roth, 1990)

Case studies have shown that on-farm investment cannot be directly linked to increased security of tenure or titling and registration. In some locations of reform, farmers have expressed fear of making improvements to the land because neighbors may resent these improvements and show this resentment by not respecting land claims (Atwood, 1990).

A title to land serves as good collateral only if an active land market exists. With customary rights still playing such a major role, outsiders to an area are reluctant to purchase a title. Furthermore, Africans generally don't want to use their land as collateral because they are scared of losing what is often their only possession. In one test area, Nakaru, only 1% of title holders sought credit. Nakaru was part of an empirical study of results of titling and registration in Kenya (Barrows and Roth, 1990). Also, lenders have difficulty recouping administrative costs on small loans; consequently, larger loans desired by the banks exceed the needs of the farmers. (Barrows and Roth, 1990)

An active land market has not emerged in any of the massive titling and registration program areas. Customary transfers, through heredity and gift, have continued to be most prevalent. Atwood (1990) believes that the criticism that indigenous land tenure systems increase risks and transaction costs to potential purchasers is inaccurate. In fact, problems are present and can be attributed to the formalisation programs. Women and seasonal herders, whose livelihood depends on their access to land, were generally excluded from titling rights. Also, some individuals managed to secure exclusive rights of ownership to previously common-owned lands (Atwood, 1990).

Volker Stamm (1994) found that some of the standard arguments for titling and registration were refuted by evidence from Burkina Faso. He found that production depended more on agricultural fertility than on rights of ownership. With the reform in Burkina Faso ownership rights could be maintained only with proof of continued fertility of the land. This resulted in a rapid decline in renting and a movement to low-level cultivation, through fear of revocation of ownership rights. In a similar study in Ghana, Uganda and Kenya, Place and Hazell (1993) found that land rights were not significantly related to yields.

3.6.6 Inter-regional Comparison

In general, the land tenure and cadastral reforms that were examined here tended to fail at increasing the security of tenure, promoting improvements to land, facilitating access to land and creating a viable land market. Mixed results were obtained in reducing land disputes, increasing agricultural production and reducing uneconomical fragmented landholdings. The only objectives that were generally achieved were those of consolidating and registering customary tenure, and of promoting the conservation of natural resources.

A. Purpose: to consolidate and register customary tenure

Reforms that attempt to consolidate and register customary tenure generally tend to succeed. For example, those that recognise the actual rights held by small farmers tend to work as there is no apparent real change, only a legal change. This has occurred in Eastern Europe where, through the privatization process, state-owned land is offered first to those who occupy it and who are forced to participate in the reform by bidding on and purchasing the land. Here the changes taking place are clear and the law is not ambiguous. Another factor contributing to its success is that this system is not completely new, since fifty years ago, prior to collectivization, land was held privately. In Peru, reforms have recognised customary occupation through privatization, and titling and registration programs. The main problems experienced here, however, are the lack of efficiency of the programs and the magnitude of the task.

There are other reforms, however, that attempt to change the customary tenure system and, in most cases, they have met with difficulty. In French West Africa, for example, dissolving the customary tenure in favour of a new system has created ambiguity, because the people still tend to rely on the previous traditional system they are accustomed to. It can be seen that the people affected by the change have to want change and should be involved in the reform process. In South America, attempts to change the customary tenure system by means of land redistribution have met with little success. In Peru, collectivization failed due to a lack of agricultural productivity. In Colombia, the government was not sincere in its commitment to reform.

B. Purpose: to increase the security of title

The security of title is a very difficult quality to measure. As there was no direct evidence that the security of land increased, we must rely on speculation. In cases where rights in land are changed, the rights become ambiguous, because people may be unaware of exactly how their rights are different. In French West Africa this has occurred due to the attempted change of the customary tenure system under law 64-46 in Senegal.

In Peru, sharecropping has been shown to increase security against violence, which may indicate the increase in security of tenure. In Colombia, land redistribution led to less security of tenure due to landowners' fear of expropriation, which caused them to evict sharecroppers and tenants in the 1960s. The subdivision of land in rural Colombia that has resulted from violence also seems to indicate a lack of security.

Privatization in Eastern Europe has led to mixed results. This process is a recognition of occupation, which, when supported by law, increases the security of land tenure. There have been problems, however, because sometimes people do not fully understand the concept of private land and therefore the security of land tenure is not fully realised. Also, since land was previously expropriated for the purpose of collectivization, people have reservations about putting trust in the security of their holdings.

C. Purpose: to promote improvements to the land

In cases where the security of tenure was not increased, land tenure and cadastral reform did little to promote improvements to land. This was because the land could not be used as collateral to obtain credit. Also, it was found in French West Africa that improvements were sometimes not realised because there was a fear of resentment from neighbours. In Eastern Europe people did not understand what secure tenure meant and did not, therefore, use their land to obtain credit for the purpose of improving their land.

In South America, land tenure and cadastral reform only managed to promote improvements to land in some cases. In Peru, programs were set up to provide small producers with credit and technical assistance, but their success was limited since not all areas were supported to the same extent. In Colombia, sharecropping arrangements tended to promote improvements to land since both the landowner and the sharecropper benefited from them. Sharecropping encouraged the landowner to invest in the land to increase production.

D. Purpose: to facilitate access to credit

In French West Africa, land tenure and cadastral reform has not increased land transfers and titles are not respected by the established customary tenure system. As a result of this, land titles are not accepted as collateral and have therefore not facilitated access to credit. As well, banks are not willing to give out small loans. In South America, credit has been made available but this has not been shown to necessarily be a result of land tenure and cadastral reform. In Eastern Europe there is no evidence that access to credit has been improved.

E. Purpose: to create a viable land market

There is little evidence that land tenure and cadastral reform do much to create a viable land market. In French West Africa and Peru there is evidence that land transactions continue to occur informally. This is because the formal market does not easily replace the entrenched customary methods of land transactions. Titling and registration in Peru have not created a land market mainly due to the lack of profitability of agricultural activities and the use of inefficient land information systems. Also, land disputes, corruption and the costs of transactions impede the creation of a land market. There is no evidence that reform has created a viable land market in Colombia.

In Eastern Europe land tenure and cadastral reform is being used to reinstate a market-driven economy as well as create a viable land market. There is indication that the market is developing but the process is slow due to the uncertainty of tenure and laws that limit transactions.

F. Purpose: to reduce disputes in land

The use of reform to reduce disputes in land has had different results in different regions. In French West Africa and South America reforms have not been successful. In South America the surveying of boundaries has in fact created disputes and led to violence. In Albania the experience has been more positive. Disputes in land have been mitigated due to the use of plans that are posted in public areas for a 90-day period, during which disputes can be resolved. After this period the plans are finalised and no discrepancies may be raised. There is no evidence from Hungary that reform has reduced disputes in land.

G. Purpose: to increase agricultural production

Eastern Europe and Peru have similar experiences with the use of reform to increase agricultural production. In Peru, land was consolidated as collective farming units to achieve this purpose and resulted in lower productivity due in part to the lack of incentive for collective farms to operate efficiently. In Hungary, collectivization increased production slightly but was not effective enough to compete on world markets. As a result, farms have been and are being parcelised and privatised. In Albania, agricultural production increased dramatically over the short term but was limited due to fragmentation. There is no evidence that land tenure and cadastral reform has increased agricultural production in French West Africa.

The use of sharecropping in Colombia seems to be unique in this study in its ability to increase agricultural production. This is because both the landowner and sharecropper have incentives to operate efficiently and invest in the land, because both benefit from the arrangement.

H. Purpose: to reduce uneconomic fragmented landholdings

Land tenure and cadastral reform in French West Africa has resulted in the reduction of uneconomic fragmented landholdings due to the consolidation process. This was seen with law 64-46 in Senegal, which consolidated lands by completely removing the concept of ownership. In South America, however, the reforms have eventually led to their increase. In Eastern Europe, reform has also caused the fragmentation of land into uneconomical units.

I. Purpose: to promote the conservation of natural resources

Land tenure and cadastral reform was only found to have a role in the conservation of natural resources in South America. Here it was discovered that less security of title resulted in more deforestation. This was because squatters tended to farm more coca and annual crops rather than legal, perennial ones. Titling and registration could be used in the rain forest to increase security of tenure and therefore reduce deforestation.

3.6.7 Conclusions

By examining disparate land reform initiatives, this inter-regional comparison has attempted to extract some lessons for general application. Chief among these is that community participation is essential for successful reform. If the reform is orchestrated by elites and remote administrators intent on uniformity (and perhaps even scornful of tillers), and the beneficiaries of the reform do not agree with the changes and actively participate, the reform will not be accepted and progress will be very difficult. This is connected to the concept of reforms by grace and those by leverage as discussed by Powelson and Stock (1987). *Bottom-up,* or grass root, reforms tend to succeed. Involving the community and accepting that it has responsibility for land can make the reform more efficient, mitigate disputes over land and reduce violence (and possibly corruption). Sadly, however, patron-client relationships, corruption and violence seem to be endemic in less-developed countries. In respect to Senegal, Wunsch and Olowu (1990) echo Tocqueville's (1956) expression of the state's disdain for the needs of the individual: "...uniformity relieves [the central government] of inquiry into an infinite variety of details..." Powelson and Stock (1990) speak of the unknowing complicity of "well-intentioned elites of the industrialized world (aid donors), who often believe that peasants are helpless and in need of protection." In reality, peasant societies are no less complex than the mainstream and their operators just as shrewd, e.g., as presented by Guardino (1996) in the context of colonial Mexico, where it was shown that peasants actively, and with great innovation, manipulated the political system with the means available to them.

Secondly, the degree of the government's commitment to full implementation is a key determinant of success. Many reforms did not succeed simply because they were not fully implemented. This was due to either the lack of dedication by those involved or a lack of resources. Full implementation must be planned from the start of the reform process; an incomplete effort runs the risk of further damage.

Thirdly, land tenure and cadastral reforms that attempt to significantly alter the existing customary tenure are likely to encounter problems. Land redistribution and drastic changes in rights to land decrease the security of tenure and create ambiguity. Titling and registration may be used to recognise the system that already exists. The most secure land tenure system is that with which people are accustomed.

Finally, reforms are unsuccessful if they do not fully achieve the stated purposes of the particular reform; furthermore, they must be supported by changes to surrounding structures and institutions. Land tenure reform alone, that is not augmented by institutional and physical supports (i.e., 'land operation reform' as described by Koo,1982), is not likely to succeed. Infrastructure, such as roads, sewers, social services and access to credit must be introduced to achieve the overall purpose of land reform.

Purpose	**Pass**	**Mixed**	**Fail**
Consolidate and register customary tenure	X		
Increase security of tenure			X
Promote improvements to land			X
Facilitate access to credit			X
Create a viable land market			X
Reduce disputes in land		X	
Increase agricultural production		X	
Reduce uneconomic fragmented units		X	
Promote conservation of natural resources	X		

Table 1: Evaluation of the rural reforms across all regions

3.7 American Indian Land Tenure

3.7.1 A Brief History of United States - Tribal Relations

In 1789, following the newly signed Constitution, the United States Government assumed the role of British and Spanish governments in making treaties with the Indian Tribes. These treaties have been listed in international law publications with treaties made by all other nations. At the time these treaties where considered to be the supreme law of the land, which had been agreed upon by governments of equal status.

The significance of these agreements is that Indian tribes where treated as if they where separate nations, rather than individual communities or groups that make up the United States of America.

Around 1871, Federal Government ceased to make treaties with tribes. One of the reasons for this change was that Government determined that the creation of treaties were an impediment to the assimilation of Indians into society. In 1887 Congress passed the General Allotment Act, often referred to as the Dawes Act. This Act converted the communal ownership of tribal land to individual ownership. Each Indian male over 18 years old was allotted a number of aces (quarter section). The Government sold all remaining land. When Senator Henry Dawes introduced the Bill to the Senate he described it as "a mighty pulverizing force, which would break down the bonds of tribalism and pave the path for the civilization of the savage."[6] Some would say that the initial part of the statement has been achieved.

In 1928 the Merriam Report declared the General Allotment Act to be a disaster and in 1934 the Indian Reorganization Act set up Reservation Business Councils to govern tribes and to take land into Trust for the benefit of Indians. After World War II Congress passed legislation that effectively terminated fifty tribal governments by cutting ties with the tribal governments. In 1953 Public Law 280 gave six states compulsory jurisdiction over Indian land. Ten other states subsequently chose to accept Law 280. The result of this loss of self-government was a gradual deterioration in social welfare and economic opportunity for Indian tribes.

Both the Kennedy and Johnson Administrations where sympathetic to the plight of the Indian tribes but it was not until 1970 under the Nixon Administration that action was taken to reverse the decline of the Indians. The Indian Code - Title 25 Indians - established a Commissioner of Indian Affairs gave them a voice at an appropriate level within the Department of Interior. This was the commencement of what is known as the Indian Self-Determination era, which continues today. The changes implemented by the Code allowed a return to tribal governments whereby the future of Indians has been and will be determined by Indians. In essence Federal Government once again recognises tribal governments as being a government of equal status.

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[6] Department of Interior - Office of American Indian Trust Website; http://www.doi.gov/oait/docs/dawes.htm

3.7.2 Rights to Land

As an individual, Indians can buy and hold title to land purchased with their own funds. By purchasing land individually they obtain the same rights and obligations in the land as a non-native would. However the Government of the United States holds the majority of Indian Tribal land in Trust for each Tribe. The Tribe holds this communal land in Trust and cannot sell it.

Individual Indians can own Trust land, which they can sell, but only upon the approval of the Secretary of the Interior. If an Indian wishes to extinguish the Trust title to his land and hold title in fee simple, he can do so if the Secretary of the Interior determines that he is able to manage his own affairs and normally only after the land has been held in Trust for twenty-five years. The Government states that this is a protection for the individual!

The majority of land held in Trust for Indian tribes and individuals (approx. 22.7 million hectares) is on Reservation land. An Indian Reservation is land a Tribe reserved for itself when it gave up its other land areas to the United States through Treaties. More recently, as additional Indian tribes have been recognised by the Federal Government, Congressional Acts, Executive Orders and Administrative Acts have created more reservations.

There are approximately 275 Indian Reservations in the United States. The largest is the Navajo Reservation covering some 6.5-million hectares in Arizona, New Mexico, and Utah. Many of the smaller reservations are less than 400 hectares with the smallest less than 40 hectares. On each reservation, the local governing authority is the Tribal Government.

The Secretary of the Interior serves as Trustee for all land held in Trust by the Federal Government, which is managed by the Bureau of Indian Affairs.

3.7.3 United States Federal Regulations

There are two primary regulations which deal with Indian Land:

- Title 25 - (Indians) of the Code of Federal Regulations contains chapters relating to dealings in Indian land. In particular, references to rights in land are made in the following chapters; Allotment of Indian Land (Chapter 9); Descent and Distribution: Heir Allotment (Chapter 10); and Lease, Sale, or Surrender of Allotted or Un-allotted Lands (Chapter 12).

- Title 43 - (Public Lands) - Chapter 3 deals with the survey of land.

Title 25 - Chapter 9 - Allotment of Indian Land

Section 331 sets out the requirements for survey of Reservation land. If any land within Reservations can be used for agricultural or grazing purposes, then the land shall be surveyed so that allotments can be allocated to individual Indians. If the land is to be used for agricultural purposed, then allotments are not to exceed eighty acres (32.4 ha), if the land is to be used for grazing allotments can be extended to a maximum of one hundred and sixty acres (64.8ha). If the land is within an irrigation project allotment sizes may be reduced to forty acres (16.2ha). It appears that the President/Federal Government, determines the location of boundaries based on possible land use.

The remainder of section 331 deals with the distribution of land within a number of tribes, examples from a few follow:

- Blackfeet Reservation, Montana - up to eighty acres (32.4ha) of an allotment can be sold;
- Crow Indian Reservation - reservation in perpetuity, for the benefit of the Crow Indian Tribe, of the minerals on or underlying the allotted lands on the Crow Indian Reservation; prohibition of intoxicating liquors; right to sell land, etc.
- Eastern Band Of Cherokee Indians of North Carolina - conveyance to the United States, in Trust, of all land, money and other property held by the Tribe; a register of Tribe members to be established and all members given an equal share in the value of the Trust; Tribe members may apply to the Tribe for exclusive use of up to 30 acres (12 ha), etc.
- Flathead Reservation, Montana - provision of allotments to all living children entitled to allotment as of 1920.

Section 332 allows tribal governments to distribute allotments, and if two Indians have made improvements to the same allotment then they may request that a formal subdivision of the allotment be undertaken and the allotment be subdivided in proportion to the value of the improvements.

Section 334 allows Tribal members not living on a Reservation to make application for the issue of an allotment to the local Bureau of Indian Affairs District Office.

Section 336 allows Indians entitled to an allotment that have settled on un-apportioned land to make application to the Bureau of Indian Affairs for the land settled upon. The land must be surveyed prior to application.

Section 339 states that this Act does not apply to certain Tribal lands, in particular the Osage Indians, and the Five Civilized Tribes (Cherokees, Creeks, Choctaws, Chickasaws, Seminoles) in Oklahoma.

Section 343 requires that the Secretary of the Interior rectify any errors made in the allotment of land.

Section 348 sets out the rights and responsibilities with regards to land held in Trust. Patents are to be issued under the name of the allottee(s) stating that the United States will hold the land in trust for twenty-five years for the sole use of the allottee(s) or their heirs.

Section 350 allows Indians to relinquish their rights in the land to the United States, if they so wish, provided they have selected other land in lieu of the allotment being relinquished.

Section 352 allows the Federal Government to cancel any Trust and issue other land in Trust if an allotment is required for power or reservoir sites.

Section 352a allows Indians to convert title held in fee simple for an allotment to title held in Trust by the United States.

Title 25 - Chapter 10 - Descent and Distribution: Heir Allotment

Section 372 states that the allotment of a deceased Indian shall be passed to their heirs provided the Secretary of the Interior find the heirs competent and able to manage their own affairs.

Under section 373 lands may be disposed of by will, provided the Secretary of the Interior approves the will.

Section 373b sets out requirements when an Indian is found to have died intestate. Basically if the land is within or adjacent reservation land it is added to the trust land of the Tribe associated with the reserve, otherwise the land reverts to the state.

Sections 372 and 373 do not apply to the Five Civilized Tribes in Oklahoma.

Section 378 allows allotments to be subdivided between heirs if this is advantageous.

Section 379 allows heirs to sell part or all of any allotment received. If allotments are sold they shall be subject to State taxation.

Section 380 allows the Superintendent of a reservation to lease any allotment belonging to a deceased tribe member if they have been unable to determine the heirs, or if the heirs do not utilise the land or cannot agree on a lease.

Title 25 - Chapter 12 - Leases, Sale, or Surrender of Allotted or Un-allotted Lands

Section 393: The allotment of any Indian may be leased for farming and grazing purposes by the allottee or his heirs, subject only to the approval of the superintendent or other officer in charge of the reservation where the land is located.

Section 396 allows allotments to be leased for mining.

Section 398b requires that all revenue generated from the lease of Trust land be deposited in the Treasury of the United States to the credit of the tribe of Indians for whose benefit the land is entrusted.

Section 398c allows the State or local authority to levy taxes on lessees for improvements and outputs. These taxes are to be paid into the appropriate Tribal fund in the Treasury.

Section 398e requires that all mining leases of un-allotted lands within a Reservation be surveyed.

No mention can be found in the Act of a requirement to survey any other land prior to the commencement of a lease.

Title 43 - Chapter 3 - Surveys

Section 52 requires that the Secretary of the Interior shall employ an appropriate number of surveyors to survey, measure and mark lands to which Indian title has been, or may be, extinguished and all private land claims.

3.7.4 Taking Land Into Trust

Since 1934 and the implementation of the Indian Reorganization Act, approximately eight percent of tribal lands lost through allotment and their subsequent sale by Indians has been re-acquired.

In an attempt to bring land into Trust at a faster rate, the Bureau of Indian Affairs has proposed amendments to the Land-into-Trust Regulations.

The goal of these amendments are to "reverse the precipitous decline in the economic, cultural, governmental and social well-being of Indians caused by the disastrous late nineteenth century federal policy which facilitated the break-up of Reservations through 'allotment' and eventual disposal (sale) of reservation lands"[7].

In 1996 and 1997 approximately 72,000 hectares of Indian land lost Trust status. Only a small portion of that number of hectares acquired Trust status. Most were on-reservation land and only involved an average area of 12 hectares.

[7] Proposed Amendments to Regulations Governing Taking Land into Trust for Indians (25 C.F.R. Part 151) Information Packet: http://www.doi.gov/bia/news/indtrreg.html

For on-reservation land these regulations are to assist tribes in the re-acquisition of land within reservation boundaries by streamlining the application process to convert the land and giving a strong presumption in favour of the applicant.

For off-reservation land the amendments have been adjusted to address all parties who may have rights in the land in a fairer manner.

Summary of Proposed Application Process

1) Tribe submits application containing information as required for on- or off-reservation parcels of land (see Table below).

2) BIA notifies State, county and municipal governments of the application, and provides an opportunity for comment on the application:

i) If ON-RESERVATION, local community and others have 30 days to comment.
ii) If OFF-RESERVATION, local community and others have 60 days to comment.

3) At the end of comment period, the applicant is provided with copies of all state/local comments, and is provided with an opportunity to respond.

4) The Department makes a decision on whether to take the land into trust, and communicates that decision in a certified letter to the applicant, with copies to all parties who commented.

i) Applicants and interested parties concurrently are notified of their right to an administrative appeal of the Department's decision.
ii) If the Department's decision is to deny the application, we will take no further action

OR

i) If the Department's decision is to take the land into trust, after any administrative remedies have been exhausted, we will complete a title examination and require the applicant to cure any title defects.
ii After all title issues are clear, the Department will publish (in a local newspaper or in the Federal Register), a notice of our decision to take the land in trust. This gives parties an opportunity to challenge the decision in federal court.
ii Assuming the successful exhaustion of judicial remedies, we then accept title to the property and it attains trust status. From then on, the land's trust status cannot be removed except by act of Congress.

On-Reservation Applications	Off Reservation Applications
Statutory authority.	Statutory authority.
Need for trust status.	Need for trust status.
Title insurance information.	Title insurance information.
Environmental compliance information.	Environmental compliance information.
Description of intended use	Description of use, including: Past uses/present/future uses. -Cultural/historical uses. -Goals to be achieved with such use. -If for housing, number of units. Location of the land: -Relative to state boundaries. -Relative to the tribe's reservation. -Relative to other trust land. -Relative to the nearest BIA office. -Relative to infrastructure (roads, etc.) Impact on local tax structure: -Projected lost revenue. -Effect on local government's ability to provide services. Identification of jurisdictional issues: -Zoning conflicts. -Provision of law enforcement. -Fire protection, emergency medical. -Traffic impacts/road maintenance. -Sanitation/sewage/trash. -Utilities. -Water supply/water rights. Identification of cooperative agreements re: -Jurisdiction conflicts.
Conveyance is necessary to facilitate self-determination, economic development, housing, or land consolidation.	Conveyance is necessary to facilitate self-determination, economic development, housing, or land consolidation.
There is adequate legal authority for the acquisition.	There is adequate legal authority for the acquisition.
The request is complete, including all supporting documentation.	The request is complete, including all supporting documentation.
The request will benefit the economic or social conditions of the applicant.	The request will benefit the economic or social conditions of the applicant.
Title evidence meets applicable standards.	Title evidence meets applicable standards.
There is adequate environmental compliance (NEPA, etc.).	There is adequate environmental compliance (NEPA, etc.).
BIA determines that after mitigation of effects on the environment, etc. that the conveyance is consistent with applicable environmental, cultural, historic, or natural resources law.	BIA determines that after mitigation of effects on the environment, etc. that the conveyance is consistent with applicable environmental, cultural, historic, or natural resources law. BIA determines that any adverse impacts on local governments and communities are reasonable compared to the benefits

On-Reservation Applications	Off Reservation Applications
	flowing to the applicant from taking the land in trust. BIA is equipped to handle the additional responsibilities of the acquisition, including sufficient staff. The location of the land relative to State boundaries, and the distance from the boundaries of the tribe's reservation, are reasonable: If in a different state, tribe's justification of anticipated benefits from the acquisition will be subject to greater scrutiny. As distance between reservation and land increases, the tribe's justification of anticipated benefits will be subject to greater scrutiny. As distance between reservation and land increases, concerns raised by state and local governments will be given greater weight.

3.7.5 Surveys

The Cadastral Survey Section, under the Bureau of Land Management, which is part of the Department of the Interior, undertakes all surveys of Federal Lands which includes all Indian Trust land, except for the original thirteen States, those added soon after (Vermont, Kentucky, Tennessee, Maine), and Texas (which had previously been independent).

In the remaining states, the original surveys were done by the Federal Government, under the Public Land Survey System, which began in 1785. After land was transferred to state or private ownership, resurveys and subdivision surveys became subject to state law and in most cases a private sector activity. But land owned by the Federal Government and all Indian trust land continues to have its survey work done by the Federal Government.

The only exceptions to this may be surveys of Indian land is not Indian trust land, or land subject to a private survey that has been acquired by Indians and is to be placed in trust. These surveys are generally carried out by the private sector, but are not frequent.

3.7.6 Comment

The basis of the legislation (Chapters) is the General Allotment Act of 1887, hence, I assume, the often paternalistic nature of the wording. As with the First Nations people, Inuit and other natives of Canada, the United States Federal Government clearly has a moral responsibility for the Indians.

Survey information has been difficult to locate. No information has been located regarding standards of surveys, but it would appear that if land is surveyed it is surveyed using traditional survey methods whereby boundaries are being defined to within 0.10m at worst.

3.8 Exemplars & Cautions: Options & Implications for First Nations

3.8.1 Generally

The review of the international experience in surveying and registration systems is that technology and techniques are a very small factor to consider. Of much more importance is the realization that such systems are a means to an end only, which end is the land administration needs of the local society.

Thus the critical question is suggesting options is; What do the occupiers of land want, or to what purpose will the systems of survey and registration of land be put? Options will depend on the extent to which a land market is sought, on the use of land as collateral in financial borrowing, on the need to map for infrastructure and resource extraction purposes, and on the extent to which external resource extractors wish to have secure rights.

One way for evaluating such factors is to examine how current uses of land (such as certificates of possession, oil and gas leases, mapping, and boundary disputes) are either inhibited or encouraged at the moment. Or are the systems (which include the CLS system and the Indian Land Registry) neutral in affecting the use of land? Certainly, the Crina system of surveying and registration is unfamiliar to, and used little by the Cree and Naskapi bands for whom it was ostensibly designed some ten years earlier. There is little question that the Crina system is technically and legally very impressive; unfortunately it appears to be little needed by the people to whom it answers (Sasseville, 1997).

The international experience suggests that surveying and titling are less important in informal settlements than are the provision of services (water, sewage, electricity, roads) and of the fear from eviction without compensation. What of such informal settlement on First nation's lands? It would appear that even on a "model" reserve such as the Stony Plain Indian Reserve in Alberta, many properties are not held by certificates of possession. Nevertheless, "occupational interests are considered by band members to be just as secure," and most residents are aware of the limits of their property (Sullivan, 1990). What of more typical reserves? Surveying and registration systems must take into account:

- the incidence of less formal occupation interests
- the security of such interests from perfunctory eviction
- the prevalence and seriousness of boundary disputes

Options must also differ from the current situation in which at least four distinct bodies (occupier, band, LSD, INAC) must coordinate their efforts before boundary surveys take place. For instance, on the Stony Plains IR, which is in very close proximity (in both spirit and location) to the WROC, a year can elapse before a request for a survey is acted upon (Sullivan, 1990:23). Similarly, delays of several months owing to plan checking, extra field work and logistics, can elapse between submission and recording of plans of surface rights.

It is difficult to argue that such a system is most efficient. On the other hand, there must be full social and economic justification to formally recognize rights in land through surveying and registration. Without such justification, cadastral refrom in the developing world has been more likely to fail to achieve targets. Indeed, in a 1992 review of 12 World Bank land titling initiatives, only one project was considered to be a success, and only two other were considered partial successes. Four broad problems were identified: lack of political support; conflicting bureaucratic priorities; lack of resources; underestimating the complexity of the task (Burns et al, 1996).

Any reform of surveying and registration systems must consider "policy, the legislative framework, local administration," as well as demographics, patterns of land use, and the current and potential market activity in the trade of land rights. To ignore the issues of intervention as well as the project environment issues is to court as system that might be technically advanced but ineffective. If a suitable survey and mapping infrastructure already exists, as it does with First Nations, then subsequent surveys and registration of rights is technically not difficult.
To summarize the exemplars and cautionary tales from the land titling projects, there are at least two key distinctions with First Nations' lands: in objectives and in prerequisites. First, the objective of most projects has been to develop agricultural potential and a strong land market in the context of economic development and a shift to a market economy. However, the objective for First Nations might well be to protect the social, cultural and economic interests of indigenous communities. If these two objectives are not mutually exclusive, or if First Nations are trying to achieve both, then international experience is useful.

Second, the prerequisite for successful projects (as in Thailand) has been a single national agency responsible for land administration (Burns et al, 1996). In that respect, the role of LSD, ACLS, and INAC is assured. However, there is decisive trend towards greater autonomy of, and devolution to, First Nations. This is demonstrated by large land claim settlements (as for Nunavut), by separate systems (as for the Alberta Metis and the Cree-Naskapi of Quebec), and by the reports of the judiciary and of Royal Commissions.

In a report under the Fatality Inquiries Act, Alberta Provincial Court Judge Reilly acknowledged the aboriginal concept of community based on “relationship”, and favourably contrasted it with reserves merely as “holding places.” He quoted extensively from the Royal Commission on Aboriginal Peoples, which was very critical of integration and of assimilation, and supportive of Indian self-government. Finally, Reilly used the work of the Royal Commission to define First Nation as having both a broad and a narrow meaning.

Reilly’s report was the basis of an editorial in the Globe and Mail newspaper, which focused on the notion of reserves as communities in which residents were empowered: “It makes sense that some semblance of private property - maybe an English-style freehold on the collective reserve - come into being. If it is your house, and not the band’s house, you won’t … trash your dwelling in an act of shelter suicide.”

To what extent do natives want to buy and sell land amongst themselves, or with non-natives?

In a June 1992 referendum, 89% of Dagestanis would not permit the buying and selling of land. Subsequent polls support this overwhelming rejection of a land market (Stanfield, 1998). There have been three main reasons cited for the rejection. First, ethnic conflicts might result if new landowners subdivide and sell parcels to others of their ethnic group and not to the historical users of the land. Second, there is a fear that the wealthy will acquire much land using illicit gains from criminal activities. Third, a belief that the rich will neither use nor improve the land, but will merely speculate in its increased value.

Are these concerns shared by First Nations? Certainly, the role of band councils is not always above reproach in the allocation of land and other resources. Are the vested interests of Dagestan mirrored by the vested interests on Reserves? Judge Reilly has identified a systemic and pernicious control of most resources and access to resources on one reserve (Reilly, 1999).

To what extent do natives want to mortgage land, and to what extent are secure rights in land irrelevant to lending institutions if the borrower is destitute?

The experience in Namibia is that "one of the most widely held misconceptions of land tenure is that once achieved it will enable the owner to obtain loans " using the land as collateral. This does not hold true for the majority of the poor, because their wide-spread unemployment and under-employment means that banks are hesitant to lend (Christensen & Hojgaard, 1997). This hesitancy is exacerbated by a lack of a credit rating, and is little reduced by a surveyed parcel or a certificate of title.

Of more concern is that the people not be evicted from their land, which security tends to encourage investing in improvements to their houses.

Finally, three questions which should inform any choice of survey and titling systems are:

- To what extent should titling systems encourage ecosystem integrity and the sustainable development of resources?
- To what extent is gender equality a significant consideration?
- To what extent should systems allow the local community to adjudicate boundaries and to resolve title disputes, as opposed to relying on INAC and LSD?

3.8.2 Conclusion

In stressing the need for the social and economic justification of all survey and registration options, the mere delivery of technical activities should not be sufficient. This includes activities aimed at maximizing the distribution of title certificates, or the recording of the certificates in a registry. Effective and equitable development also demands:

- the stewardship of land resources
- the security of rights in property
- efficiently recording transactions
- minimizing social conflicts over land

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Comments:

1) Professor Richard Collins, University of Colorado School of Law

Chapter 4

Synthesis of Interviews with Aboriginal Groups

4.1 General

Lands Managers and Administrators from a diverse sampling of First Nations from across the country were interviewed on the general questions of:

- How well does the present system of land description/land survey meet your needs?, and
- What specific concerns do you have about the administration of surveys and land descriptions?

The First Nations interviewed differed in population, land area, proportion of residency on-reserve, etc. They spanned the spectrum in several other respects as well, and the responses are summarized below, based on these distinctions:

- whether rural or urban,
- degree and type of land development or resource extraction engaged in, and
- attitudes toward property.

Response on these factors ranged from active involvement in logging and fishing, and leasing of urban land for office buildings and shopping malls by First Nations in British Columbia; to agriculture, oil and gas development in the prairies; industrial leases, gaming establishments, etc. Based on the responses, our sense is that, where First Nations land is valued for its revenue potential, expectations toward property definition and the responses to the above question areas differ accordingly. It has been observed in the population of First Nations involved with the Framework Agreement on First Nations Land Management that, where land values are high and significant land development takes place, a high reliance is placed on monumented surveys.

Respondents indicate that the vision of the First Nations leadership, the local culture and level of cooperation with neighbouring holders/users in Crown and patented lands are important factors in determining the way First Nations respond to the following research questions:

- whether customary allocation or Certificates of Possession (CP) are used for individual landholdings, and
- whether the Indian Lands Registry is used.

In many First Nations, allotments of land are made at the pleasure of the First Nation, as represented by Chief and Council. The interests granted are recorded in First Nation records, with or without

copies being sent to Indian & Northern Affairs Canada (INAC). In these First Nations, CP's are not ordinarily used but the rights in land are locally recognized for all intents and purposes. On the Blood First Nation, for example, rights of 'general use and occupancy' are granted to members at the pleasure of Chief and Council for ordinary residential landholdings. Transfers of significant resource extraction rights are normally registered in the Indian Lands Registry (ILR) in the interest of certainty, but there are exceptions.

Significantly, the reserve with the largest population in Canada (Six Nations of the Grand River, at 21,000 people residing on reserve) does not use the *designation* mechanism under the *Indian Act*, preferring to enter into informal (unregistered) leases with non-aboriginals.

There also remains the "estimated 1%" of transactions which are registered neither with the First Nation or the ILR - *customary tenure*, colloquially termed *bukshee* (e.g. leases). In such arrangements, individuals would allow non-aboriginal people not belonging to the First Nation to harvest produce, etc. strictly by private agreement.

4.2 Land Disputes

The majority of First Nations interviewed reported that land disputes were common - whether related to title or boundaries. Some disputes originated, it is thought:

- from improper land dealings orchestrated by the former Indian Agents;
- in the discovery of discrepancies between existing surveyed limits and unplanned occupation of lands - i.e., where neighbours did not know where the buried post lay; or from conflicts between limits of land as occupied before large surveys of the post-war period, and the limits as then surveyed.

Some First Nations resolve these disputes by means of committees composed of Councillors, Elders, or a combination thereof. It is interesting to speculate whether the high incidence of disputes is related to the use of the ILR. For example, at the Blood First Nation, where there are approximately 300 known disputes (highest of those interviewed; Cf. 100 disputes reported at Kahnawake), allotments are not necessarily registered in the ILR.

The disputes at Kahnawake are said to be the result of improper surveys of 100 subdivision lots and, consequently, may involve much more than 100 disputes. Kahnawake, along with others interviewed, are in the process (independently) of developing a means of resolving disputes, perhaps including a ground survey to confirm the boundaries. Indeed, there is much internal discussion at Kahnawake regarding the future of the land tenure system, a principle of which may be to survey a parcel on the ground only when there is a dispute (i.e., without systematic official survey before allotments are made).

4.3 Degree of Local Responsibility for Lands Administration

Interviewees' responses also differed on the basis, perhaps, of their *actual experience* with devolution of lands responsibilities (e.g., through 53-60 delegation) and due to the perceived *mode of self government* that they might wish to adopt under present or future legislation. Those First Nations with delegated authority under ss. 53 & 60 of the Indian Act (s. 53, relating to management and sale of absolutely surrendered and designated lands, and s. 60 relating to the granting of such authority over reserve lands) were, of course, accustomed to preparing transfer documents and registering interests with the ILR. Throughout the interviews, all First Nations expressed a desire to retain the *control* of their records and registration process.

4.4 Intention and Capacity to Perform Certain Surveying Functions

The issues discussed with individual First Nations under this heading related to whether they had internal geomatics capacities, such as trained survey technicians or GIS & GPS capacity.

Most small First Nations appear to defer to professional land surveyors when in need of land definition of any consequence, e.g. in support of formal grants of oil and gas rights. First Nations interviewed profess a good working relationship with the surveyors retained, either directly or by Legal Surveys Division (LSD) on their behalf. The requirement that contract and LSD staff surveyors *liaise* with the local authority (e.g., First Nation Administrator, Lands Manager, etc.) is appreciated by First Nations. For the ordinary location of boundary lines, often Lands Managers and on-reserve survey technicians (usually referred to as *surveyors, band surveyors*) do some degree of retracement and layout and informing holders in dispute.

At Six Nations, there are local surveyors and survey technicians (some working with Ontario Land Surveyors & Canada Lands Surveyors) who do much of the parcel layout, albeit with non-standard monumentation. Field notes are kept and, under agreement with LSD, copies of some of the notes are filed with the Client Liaison Unit. They are looking for a better survey system - perhaps looking for a technological magic bullet - GPS - to make the process of surveying much easier. In respect of this would-be enabling technology, the impression is that "LSD is not letting GPS work to its full potential."

On the Blood First Nation of southern Alberta, the First Nation survey technicians lay out individual parcel lots. There are many members who are experienced in some aspects of surveying and oil & gas work. The First Nation would like to build on these skills to increase local capacity in surveying and technical services related to resource extraction (timber, oil & gas).

By and large, the capacity for GIS appears to be low in the particular sample of First Nations interviewed. It is our sense that the larger reserves, such as Six Nations of the Grand River, who have pursued automated mapping in support of land claims research, are more likely to be involved in GIS. Six Nations have developed their own GIS and are looking to test it.

The Blood First Nation, whose concerns include environmental monitoring and management of their large land base, express strong interest in conducting a biophysical inventory as a key component of their GIS and land management efforts. At Kahnawake, survey technicians do some surveying, e.g. for road construction. The First Nation would be interested in collaborating with a Canada Lands Surveyor who, with appropriate checks and balances, would certify the work of First Nation technologists in legal surveys for entry into the Canada Lands Surveys Records. As mentioned above, the proposed model seems to avoid the need for official surveys unless there is a problem.

4.5 Perception Of, and Relationship With, Legal Surveys Division, ILR, INAC

Where First Nations commented on the role of LSD, they reported a good relationship in general, although they are (universally) concerned about the length of time taken to secure official plans and registration plans. There is an additional concern, especially on the large reserves with a high volume of land transactions and a high need for housing lots, over the backlog in survey requests (e.g., in the order of 300 at Six Nations).

By contrast, it is reported that Maliseet First Nations in New Brunswick are generally satisfied with the protections and the level of security afforded under the ILR. Boundary disputes are uncommon in these communities, since popular sentiment holds that "everyone knows where their boundaries are." The fact that surveys are regarded as being simply an administrative requirement under the *Indian Act*, and not valuable *per se*, reflects a degree of alienation from the lands administration. The sentiment at a large southern Ontario reserve is that the ILR is out of date and does not meet current needs; further, it is asserted that INAC fulfills only the minimum requirements in parcel description that are mandated by legislation.

One large First Nation in the west, whose working relationship with LSD is good, suggested the existence of a *culture gap*: i.e., the need for cultural sensitivity training of personnel in the administration (and, we sense, by extension, perhaps private sector surveyors also) in the perspective and traditions of the native peoples on whose lands they work.

Training of the accustomed type provided by LSD, i.e. in interpreting legal descriptions and survey plans, is appreciated and constitutes an important support to lands staff. Overall, training in lands management needs to be comprehensive, standardized and available in locations across the country.

4.6 Organizational Initiatives

On an institutional level, the Blood are in the process of negotiating a co-management agreement with INAC. Normally, this is achieved through delegation of ss. 53-60 lands responsibilities. However, the Blood and another First Nation in BC are seeking to avoid the transfer of lands responsibilities, *and* the Crown's existing "fiduciary" responsibility (interpreted as liability) in lands matters. The negotiation of a specific co-management agreement is seen as a way to secure the authority to deal with lands matters

without assuming the liability for acts done by INAC when they administered lands exclusively. In this regard, the Blood are reportedly in the process of challenging the 1930 Natural Resource Transfer Agreement on the basis that it was enacted without consultation.

In addition to studying possibilities for future land tenure systems, the Kahnawake First Nation are involved in negotiations to have jurisdiction for a number of activities transferred to the First Nation. Among these is land administration, which includes land registry and land survey. The perception is that INAC has been reluctant to add surveying services to the list, apparently because they feel it is not their department's responsibility. Under a new negotiated system, it is contemplated that most provisions of the *Indian Act* (except, e.g., provision for protection from seizure) would be displaced and the First Nations' own laws would apply. Whether the Canada Lands Surveys system will be displaced or incorporated into new legislation and standards is also uncertain.

Like the Blood and the Mohawks of Akwesasne, Kahnawake are also concerned about inheriting INAC's liability for mistakes made in the past. When the ILR was instituted in the 1960s, an attempt was made to resolve many of the problems with the land records, but the project was not completed by INAC. The resulting land disputes are perceived today as a legacy of the past (i.e., INAC) administration.

4.7 Summary

These variations indicate a wide range of needs and approaches to property rights and parcel definition. However, the significant commonality is their commitment to building and strengthening their land institutions and their capacity to manage land transactions and to exercise a substantial degree of local control of the management of their lands. Still, some First Nations seem to take the view that, although the existing system of government services which has served them has been less than perfect, they would welcome improvements in land management, but do not expect sudden significant improvements. For instance, one First Nation Administrator spoke about the First Nations experience with service provision by INAC as providing a testing ground for different types of water main - first, concrete watermains, then wire-wrapped cedar lath - as a precedent for their general low expectations of the property rights system, as administered by INAC. In general, resistance to, and skepticism about, initiatives driven by the *Indian Act* administration appear to be high. However, the official referred to above also related the First Nations satisfaction with surveys performed by LSD.

4.8 Interviews with Aboriginal Groups - Persons Interviewed

Lands Managers / Administrators from the following First Nations were interviewed by telephone in November and December, 1999:

Mr. Elliot Fox, Director of Lands and
Mr. Calvin Crosschild, Technical Services Advisor
Lands Department
Blood Tribe
Standoff, AB

Mr. Dwayne Morin
Assistant Lands Manager
Enoch Cree First Nation
Winterburn, AB

Ms. Rhonda Sullivan (written response)
Land Administrator
Ms. Sharon Brahams (telephone interview)
Administrative Assistant - Cowichan Tribes
Duncan, BC

Mr. Frank Lindsay
Band Manager
Gitanmaax First Nation
Hazelton, BC

Mr. Bob Decontie
Lands Advisor
Kahnawake First Nation
Kahnawake, QC

Mr. Henry Bear
Lawyer - often represents Maliseet First Nations in New Brunswick
(e.g.) Madawaska Maliseet First Nation
Madawaska Maliseet First Nation, NB

Mr. Phil Montour
Lands Administrator
Six Nations of the Grand River
Ohsweken, ON

Chapter 5

Options for Land Registration and Survey Systems for Aboriginal Lands

5.1 Structure

This chapter will review a series of options for land registration and survey systems for aboriginal lands. The structure of the chapter will be as follows:

- General Comments
  - The influence of the land tenure model
  - Conclusions from international research
  - Flexible land tenure models
  - Requirements for Human and Technical Resources
  - Homogeneity

- Land Registration Systems
  - Introduction
  - Criteria for evaluation
  - Examination of options

- Survey systems
  - Introduction
  - Defining characteristics of survey systems
  - Examination of options

- Conclusions

5.2 General Comments

5.2.1 The Influence of the Land Tenure Model on the Choice of Land Registration and Survey Systems

Land Registration and survey systems must be designed to support the land tenure system in place in a jurisdiction. Most land registration and survey systems in Canada have been developed to support land tenure systems which are of non-aboriginal origin. While it is impossible to predict the development of models of aboriginal land tenure, some trends can be noted. First, the concept of communal tenure is strongly rooted in aboriginal practice [see s. 2.5.1]. Second, as aboriginal groups begin to participate

in the global economy, at least some movement away from strict communal tenure may be required. If communal rights are to be individualized, some form of land registration and survey systems will be needed to support that tenure system. The nature of the tenure system will help determine the most appropriate land registration and survey systems. We do not have advance knowledge of the development of these new land tenure systems. Thus, the discussion of land registration and survey systems must be general in nature. Most important, any proposed options must be flexible enough to adapt to new tenure concepts.

5.2.2 Conclusions from International Research

Summary of Key Points

Land reform projects from around the world have been examined with a view to building on the experiences of others. The following is a summary of key points which come from that research:

- Any series of property rights registration options must incorporate informal, traditional or customary systems of property rights in land. Such traditional systems have arisen over many generations in response to a complex web of historical, social, and economic forces, and are ignored at the peril of any system which seeks to sweep them asunder.

- All surveying and land registration options should include mechanisms for resolving and arbitrating land disputes. The recognition, fostering and use of customary arbitration and mediation bodies is best. Other mechanisms include formal tribunals, land judges, local authorities, grass-roots community organizations, and local leaders.

- Although surveying options will not necessarily enhance the transfer of property rights, they will allow occupiers of land to know with certainty the extent of those rights and should allow land administrators to keep a better inventory of such lands.

- Surveying options should rely on visible, physical features, the choice of which will vary according to topography, vegetation cover, remoteness, use of land, and the wishes of First Nations. Such monuments will include natural features as located on the ground (tree-lines, watercourses); built features such as fences and ditches, and visible boundary markers. However, the feature chosen must be integrated to a reference system, such as the CSRS, so as to facilitate mapping for infrastructure improvements.

Background

As an international standard, the United Nations Expert Seminar on Practical Experiences regarding Indigenous Land Rights and Claims at Whitehorse (March 24-28, 1996) recommended that " . . . guidelines for land selection or demarcation of indigenous lands should be jointly negotiated in a fair and

equitable process and without the imposition of arbitrary criteria." This highlights the need for consultation between government and aboriginal peoples in the design of appropriate land surveying and land titling systems, and suggests a standard not unlike those of ISO 9000 (quality control) and ISO 14000 (environmental integrity).

To paraphrase UNCHS (Habitat), one of the cornerstones of equitable human settlements development is the right to land and security of tenure. Equitable land policies, which must include (but are not limited to) systems of surveying and titling, go a long way to reducing poverty and social instability in many countries, particularly in the urban areas. Indeed, access to land and security of tenure are seen as conditions for sustainable development by UNCHS.

- In Central America UNCHS has assisted in the development of SISCAT (Sistema Unico de Catastro Municipal), a low cost, user-friendly computer-based property register in Bolivia and Nicaragua. In the latter country, it has helped in the collection and management of land taxes in 143 municipalities.

- In parts of Morocco, a CDA (Community Development Association) has been formed, consisting of sub-dividers, land owners, and concerned local residents. One of its objectives is to fight irregular development, which might otherwise be permitted by the local authorities.

The experience in many French-speaking countries in sub-Saharan Africa, is that public authorities allocate parcels of land to beneficiaries, who receive a permit to occupy. This permit can be converted into a freehold title after the parcel has been duly developed. However, if the conditions of development are too onerous (regarding size and type of construction), then a freehold title is not granted. After a few years, therefore, the beneficiary is in an irregular situation.

Such experiences demonstrate that there is no integration of irregular settlements without the intervention of public authorities in the form of surveying and titling. Three options have been identified, which are alternatives to traditional (slow and costly) systems of granting land titles;

- guarantee tenure security without legal regularization, by ensuring that transfers of land and evictions only occur through arbitration or mediation.

- recognize the legitimacy of informal settlements with new forms of conditional ownership, in which ownership of use rights to land are flexible, arrived at through negotiation, and are reversible. These include the right to build on land, and the right to access services and infrastructure.

- legalize informal land delivery channels, so as to enable land to be supplied and demand to be met.

Case studies:

Security of tenure does not necessarily imply leasehold or freehold titles, as shown by reference to a few case studies (listed alphabetically):

Albania - The immovable property registration system (IPRS) offers many advantages over the traditional owner-based deed registry system, and over merely a parcel-based system. It is a property-based system, and thereby incorporates vertical properties such as apartments. Its implementation has been slowed, however, and there is a realization that resolving land policy and boundary dispute issues is more important than "having the precise area of a parcel." It is now being recommended that the financial costs and the social impacts be continuously monitored, so as to allow for different versions of the system in different circumstances.

Cameroon - The 1974 Land Ordinance introduced a state-sponsored land titling program. Empirical data suggests that fee simple private property rights have not developed in Cameroon's agrarian sector over the subsequent 25 years. Nevertheless, farmers' tenure security has been enhanced, through the placing of concrete boundary monuments, and land administrators have been able register underdeveloped land thereby reducing the contradictions between state law and common law.

Honduras - The PTT (Land Titling Project for Small farmers) began in 1982, under an agreement between the Government of Honduras and USAID, with the objectives of enhancing security in land rights, of facilitating credit, and of improving agricultural productivity. Unfortunately, its implementation was predicated on the assumption that, until then, a legal vacuum existed concerning property rights in land. In ignoring the existence of an informal system, the PTT has meant that very few property transactions and parcel subdivisions have been registered since 1984. Because the register is a distorted representation of locally and legally accepted distribution of land rights, it tends to create new boundary and title conflicts rather than resolving existing conflicts.

New Zealand - In the South Island, the Ngai Tahu Claims Settlements Act 1998, has required that Land Information NZ (the LSD counterpart) investigate, inspect, select, map, describe, and research settlement sites. These are sites, fee simple title to which vests in the Crown or in a third party, which have spiritual meaning to Ngai Tahu. The settlement extends to registering memorials of first refusal on every certificate of title containing relevant land, the removal of the memorials when sales of the parcels comply with the right of first refusal process, and the transfer of parcels.

Most significantly, the legislation introduced a new form of land tenure. Nohoanga Entitlements provide a right to occupy 72 specified sites, each of about 1ha. in area, for camping purposes and for not more than 210 days per year. The sites can only be created on Crown land, but not in parks, riparian reserves, or on unopened road allowances. The sites must be defined by a Class b survey plan, will be recorded in the Digital cadastral database, but will not be recorded in the Land transfer records.

Namibia - A "Flexible System" has been proposed so as to provide secure tenure in large sections of the rapidly growing urban areas. The system would consist of a starter title, a landhold title, and freehold ownership:

- The starter title applies to a block of land, within which up to 100 families live. Only the outside boundary of the block is surveyed, the interior sites within the block are not defined. The starter title allows the holder to occupy the site, and transfer the right, subject to the custom of the block.

- The standard of surveying increases, as do the checks performed before registration, as the title is upgraded landhold title and then to freehold ownership. However, such upgrading would only take place when the entire group within a block agree, as justified by the use and value of the land.

Zimbabwe - Existing boundaries in communal areas are mutually agreed-upon, and correspond to natural features such as grass strips, earth banks, paths, and watercourses. Disputes about boundaries are exceedingly rare. In response to a 1994 Land Tenure Commission report, it has been recommended that boundaries be delineated by a simplified series of straight lines which approximate the curvilinear boundaries at the time of adjudication. This would allow boundaries to be represented as a digital data set which could be separate from, but overlaid on topographic maps or rectified photographs.

5.2.3 Flexible Systems of Land Tenure

It is important to recognize that it is possible to utilize varying land tenure systems on the same land base. For example, it may be that certain aboriginal groups wish to adopt a communal model of land tenure for a portion of their lands, but where economic development is to take place, to adopt a tenure system that recognizes more individualized rights to land. In such circumstances, no formalized land registration or survey system would be required on the communal lands, but systems which would support individualized rights would be required for the remaining lands.

Internationally, such flexible systems exist, as seen in the discussions of the Namibian situation above. In that system, the level of registration and survey "improves" as the value and use of the land increases. Such systems may prove attractive to aboriginal groups.

5.2.4 Requirements for Human and Financial Resources

Certainly one of the factors to be considered by aboriginal groups when determining whether or not to develop their own land registration or survey systems is cost. Cost will include both human and financial resources. The inherent conflict is apparent - the "best" land registration or survey system might be the one that is designed and implemented by and directly reflect the culture of the group that it will affect, yet such highly customized systems would be the most expensive to develop and operate. The drawing of the best balance between these issues will be a choice for each aboriginal group.

5.25 Homogeneity

The fact that many aboriginal groups now have or will have the power to adopt their own land registration and survey systems leads inevitably to the possibility that there might be dozens of such systems created. While each of these systems might be designed to reflect the individual culture and circumstances of the aboriginal group that uses them, some consideration should be given to the potential disadvantages of the loss of homogeneity.

A unique land registration or survey system will require those who deal with land in that jurisdiction to expend considerable effort to learn the details of the system. This effort will raise costs and potentially cause delays in land transactions. As with most of the factors which influence the choice of land registration or survey systems, a trade off is involved. In order to reflect the individual needs of the group in question, the system developed might be so individualized that it negatively influences development.

5.3 Land Registration Systems

5.3.1 Introduction

This part will examine models for land registration systems on aboriginal lands. As a first step in that examination, the criteria for assessing the merit of any land registration system will be set out. Some of these criteria will be identified as essential (i.e., a land registration system must be able to answer the question "Who holds what rights in this land?") while others will be identified as desirable (i.e., a land registration system should be as cost effective as possible.)

Next, a range of options for models of land registration systems for aboriginal lands will be defined. Some of these are existing models, while others are conceptual.

Finally, the identified models will be assessed against how well they address the identified criteria.

5.3.2 Types of Land Registration Systems

A land registration system has been defined above as a system designed to ensure that all existing rights to individual parcels are identified, recognized by the governing authority and recorded in some suitable form. The above materials have identified three types of land registration systems - private conveyancing systems, registration of deeds systems and registration of title systems.

Private Conveyancing Systems

Private conveyancing systems are not generally formalized systems. Instead of relying on some government imposed structure, private conveyancing systems depend on the occupier of land either having in their possession title documents such as deeds or on "local knowledge" of the state of tenure in a community. This local knowledge may be sufficient to convince a potential purchaser that an "owner" has an acceptable title to the property. In this report, land registration systems where an aboriginal group would keep internal records of who held what rights in land have been considered as private conveyancing systems. These systems may be effective in small, non-mobile communities where local knowledge is a significant factor. Aboriginal communities may be just such communities. Certainly, examples exist on aboriginal lands where private conveyancing systems are sufficient to meet the needs of the group.

Registration of Deeds Systems

Registration of deeds systems have a long history in jurisdictions where real property law is based on the English legal system, including Canada. A registration of deeds system is based on the concept of registration of conveyancing documents in a public registry and a system of priorities where registered documents have priority over unregistered ones. If a document is registered, the public is deemed to have notice (or knowledge) of it. All registered documents are indexed, either based on the names of the parties to a document (grantor/grantee indexing), or sometimes based on the property to which the document relates (parcel indexing.) Registration does not affect the quality of a document, that is, simply registering a deed does not mean that the grantee named in it has a valid title to the property. In fact, registration only makes a difference in the effect of a document when there are two competing documents for the same property. In such a case, the registration of deeds system establishes the priorities as between the competing documents, that is, it decides which of the competing documents will win. For example, if A sells a property to B and one day later sells the same property to C, the deeds that B and C hold are competing. The registration of deeds system provides that the first one to be registered will win. This is known as a "race" registration of deeds system. A variation on the race system is the "race/notice system" where if the grantee in the second document had notice (knowledge) of the first document, then the second document will not win, even if registered first. This refinement helps to prevent some frauds where A might sell to B and then to C, who in on the scheme and registers first. Registration of deeds systems have been described as negative in nature. Registration does not make a document any better. It just prevents the loss of rights to a competing document. In order to determine who holds all of the rights to a particular property, a title search must be undertaken. Registration of deeds systems are still in place in provinces in eastern Canada, although efforts have been underway for some time to convert these systems to registration of title systems.

Registration of Title Systems

Registration of title systems are more recent in origin, dating from the mid-1800's. Under a registration of title system, the official register indicates at any time who is the actual holder(s) of all of the rights in a particular property. In addition, the state generally guarantees that the register is correct. This guarantee is generally supported by an assurance fund which is used to compensate anyone who suffers a loss as a result of an error in the system. Registration of title systems are in place in Canadian provinces from Ontario west and in the territories.

Some of the most important differences between registration of deeds and registration of titles systems are set out in the following table:

Registration of Deeds Systems	Registration of Titles Systems
In order to determine who holds what interests in a parcel, a title search must be carried out. The title search is generally carried out by a lawyer representing a purchaser. The lawyer guarantees the results to his or her client.	The system directly answers the question of who holds what interests in a parcel. The state guarantees that the answer is correct. No title search is required.
Registration of documents is voluntary because title passes to a purchaser of an interest as soon as the document is "signed, sealed and delivered." Registration does ensure the priority of the registered document over an unregistered or later registered competing document.	Registration of documents is mandatory. No title will pass to a purchaser unless the documents are registered.
As long as a document meets certain technical requirements of form and execution, it may be registered, even if the grantor's title is defective or nonexistent.	Each document is examined for content before it is registered. Documents which do not correspond to the state of title as found in the title register are rejected.
Documents are generally indexed under a grantor-grantee index based on the names of the parties to the document. Some systems index documents to parcels.	Documents are registered based on the parcel that they affect. Parcels are generally assigned a unique parcel identifier.

If an aboriginal group wishes to adopt a formalized land registration system for some or all of its lands, one of the first questions that must be answered is what form the system should follow. The literature is clear that a registration of title system has many advantages [see Simpson, 1976 at p. 163-171], but the answer to the question may not be that simple. A well-designed registration of deeds system with parcel indexing may be almost as effective as a registration of title system and may have other advantages. As discussed above, a private conveyancing system with internal record keeping may also be appropriate. The following table summarizes the factors:

Advantages of a Private Conveyancing System	Advantages of a Registration of Titles System	Advantages of a Registration of Deeds System
Simplest and least expensive to establish and operate. Under direct control of local group. May be integrated with wider land information system if records are parcel based and computerized.	Directly answers the question "who holds what rights in this land." As a result, no title search is required, saving time and expense. May be backed by an assurance fund which will compensate those who suffer a loss because of an error in the system More easily integrated with a wider land information system because tenure information is directly available. Security of tenure is enhanced. Under a registration of deeds system, often a title search reveals minor title flaws which cast doubt on the state of the title. Under a registration of title system, this is not an issue, the title is guaranteed by the state. Less archiving of materials required.	Requires simpler legislation. No need to set up and maintain an assurance fund. Less training needed for staff. Does not require extensive title investigations to start system. Parcel indexing can reduce effort required for title search and make integration into land information system practical, however, if parcel indexing is chosen, more staff training is required.

As discussed above, in many jurisdictions where communal tenure is the norm, private conveyancing systems may be adequate to meet the needs of the group. When communal tenure is individualized, more rigorous land registration systems will generally be required. It may be that an individual aboriginal group may wish to maintain communal tenure and a private conveyancing system on part of its lands and adopt a more individualized tenure system with a more rigorous land registration system on other parts of its lands.

This is in no way intended to suggest that the interests held by individuals under a communal land tenure system are any less important or valuable than those held under an individualized land tenure system. The land registration system only provides evidence of who holds what rights in land, it says nothing about the inherent value of those rights. Simpson [1986, at pp. 9-10] uses the analogy of a passport. A passport is evidence of citizenship, just as a certificate of title issued by a registration of titles system is evidence of who holds what rights in the land in question. Whether or not a person possesses a passport does not affect the fact of their citizenship. If that person intends to travel internationally, having the passport as evidence of citizenship will be necessary. If they do not travel, they do not need the passport. Similarly, if rights to land are held primarily communally, it may not be necessary for an individual holder of limited rights to be able to rigorously prove the status of those rights.

The adoption of a private conveyancing system will have some disadvantages. First, it may be that a potential purchaser of a property right may not be satisfied with the statement by an aboriginal group that title to the right is clear. The lack of a formalized, rigorous land registration system may therefore impair economic development on the land base of the aboriginal group. Second, an internal system would generally not provide the same level of security of tenure that would be available under a land registration system where documents are publically registered. Internal systems are inherently more susceptible to error or even fraud. As discussed in Chapter 3, the freedom from fear of eviction from land is one of the most valuable benefits of rigorous land registration systems.

5.3.3 Criteria for Assessing Land Registration Systems

In attempting to assess land registration systems, some criteria for comparison must be chosen. This section will set out those criteria as used in this report.

It should be noted that many of the criteria are interrelated. Thus, if an increase in accessability of a particular system is desired, it may be necessary to open more access points (offices) or improve remote access. Either option will increase the costs of running the system. Thus, the choice of any system will be based on a series of compromises. The best system for a particular jurisdiction will depend on how the compromises are viewed.

Some criteria for a land registration system have been defined as essential in order for the system to maintain rigor. For example, if the effectiveness of a system is so reduced that the system can no longer be used to conclusively prove who holds the rights to a parcel of land, the system loses its rigor. As discussed above, it may be that absolute rigor is not required in some circumstances.

The following criteria, then, may be considered when evaluating models of land registration systems:

A land registration system must:

- effectively answer the question "Who holds what rights in this parcel of land?" A registration of titles system will answer that question directly and the answer will be supported by a state guarantee. A registration of deeds system will only answer that question indirectly after a title search. A private conveyancing system cannot answer that question with the rigor required for many types of transaction;
- be flexible enough to support the land tenure system in the jurisdiction. For example, if the land tenure system allows joint tenancies to be severed by a conveyance of one joint tenant's interest from himself to himself (or herself to herself), then the land registration system must permit such conveyances to be registered. More particularly, with regard to land registration systems for aboriginal lands, such systems must be flexible enough to support informal, traditional, or customary systems of property rights and whatever system may be adopted for individualization of those rights;

- contain a mechanism for arbitration and resolution of disputes; and
- support the identification of all overriding interests, that is, interests which may exist in a specific parcel without registration. An example of such an overriding interest would be property taxes assessed against a parcel. Most jurisdictions give priority to such charges as against registered charges, even when no notice of them is registered. It must be possible for such overriding interests to be identified and the status of them checked.

A land registration system should:

- screen for ineligible interests. In many aboriginal land tenure systems, only persons of a certain class may hold some interests in aboriginal land. For example, under the land tenure system defined by the *Indian Act*, only First Nation members may hold some interests in reserve lands. A conveyance of an interest to an ineligible person may therefore be void. There should be some mechanism in place to screen for these void conveyances so that they are not registered and cast doubt on the true state of the title to a parcel;
- be as simple to use and operate as is possible consistent with maintaining the integrity of the system;
- be as inexpensive to operate as is possible consistent with maintaining the integrity of the system;
- be easily accessible. Information about land tenure should be freely and easily available.
- be integrated with (or be easily integrated with) a wider land information system. Tenure information is critical to a parcel based land information system. A land registration system should be a basic component of the wider land information system.

5.3.4 Definition and Evaluation of Options for Land Registration Systems for Aboriginal Lands

This part will set out options for land registration systems for aboriginal lands. These options are based on or include existing models in Canada or variations of those models. Data from international experiences will inform the discussions of these options. Each identified option will be assessed based on how well it meets or might meet the criteria defined in the previous part. Note that the assessment is carried out from the point of view of the aboriginal groups. Thus, for example, accessability will be assessed from the point of view of the aboriginal group, not that of non-aboriginal individuals or governments.

The following options will be considered:

- The Indian Lands Registry under the *Indian Act*;
- The Land Registry under the James Bay and Northeastern Quebec Agreements;
- The land registration system created under the Alberta Metis Settlements legislation;
- Provincial or territorial land registration systems;

- A federally supported generic land registration system into which individual aboriginal groups could opt; and
- Internal (private conveyancing) systems.

It should be emphasized that aboriginal groups may wish to adopt more than one land registration system. For example, an internal (private conveyancing) system may be chosen for areas of the aboriginal land base where communal tenure is adopted. In other areas, possibly where significant resource development occurs, a more rigorous system may be adopted.

Option 1 - The Indian Lands Registry

Description of the Model

The Indian Lands Registry has been described in some detail above [pp. 2.9-2.11] and that description will not be repeated here. The system is mandated by the *Indian Act* [1985] and is presently applicable to reserves (including surrendered and designated lands) across Canada.

Assessment of the Model Against Defined Criteria

Effective - The Indian Lands Registry has some serious structural flaws. It is often said that the system has characteristics of both a registration of titles system and a registration of deeds system. In fact, it succeeds as neither. There is no guarantee of the status of title given by the system and interests may exist without registration. The system thus fails as a registration of titles system. There is no method for establishing priorities between registered and unregistered documents for some classes of interest and thus no effective way to conduct a title search. The system in its current form thus fails as a registration of deeds system. It is important to note that these deficiencies could be corrected if the Indian Lands Registry were given proper legislative support.

Flexible - the system in its present form could not support any land tenure system other than that imposed under the *Indian Act*. Again, this deficiency could be remedied.

Arbitrates Disputes - there is currently no dispute resolution system.

Deals with Overriding Interests - the land tenure system imposed by the *Indian Act* is affected by few (if any) overriding interests. The Indian Lands Registry thus has not been designed to deal with such interests.

Screen for Ineligible Interests - the system is designed to screen for ineligible interests.

Simple to Use and Operate - the system is complex to use. The registration process requires detailed forms to be presented in support of documents. Many documents need approval of the Minister (or a delegate) before they may be registered. The system is also complex to operate and maintain. It is a centralized system with satellite offices in the regions. Documents are registered in the central office and copies are maintained in the satellite offices. Extensive checking of submitted documents is undertaken.

Expensive to Operate - Because the system is complex, it is expensive to operate. From the point of view of individual aboriginal groups, the system is maintained by the federal government, and thus the expense is not borne directly by the groups themselves.

Accessible - although the registered documents are public, the nearest satellite office of the system may be far away from any given reserve. To counter this access problem, Indian and Northern Affairs Canada (INAC) has arranged remote access to the registry information by modem. This access is currently available at many reserves. [Isaacs, 1999]

Integrated - since the records are indexed on a parcel basis, it is possible to integrate them into a land information system. The registry information has been integrated in small demonstration projects, particularly in Atlantic Canada [Isaacs, 1999]

Summary

The Indian Lands Registry as it currently exists does not meet the required criteria set out above. If the system were reviewed and significant legislative amendments were made, it could be made to meet those criteria. The other criteria (ease of use, expense, accessability, etc.) may also be addressed with greater or lesser success. The model thus remains a possible option if some significant changes are made to it.

If efforts were made to correct the problems noted with the Indian Lands Registry, a significant benefit would result in that a large volume of material is currently registered under the system. The development of a new land registration system would require the expenditure of effort to re-register that material under the new system.

Discussions with aboriginal groups also indicate that there is a problem with older documents in the system. It appears that many documents which pre-date the development of the current system are not properly reflected by it. These documents apparently still exist in hard copy, but are not properly indexed against individual properties. If the Indian Lands Registry is to effectively reflect the state of the title to any parcel, this backlog of older documents must be cleared up.

A new form of registry is to be developed under the *First Nations Lands Management Act* [1999]. The details of the application of that act have been discussed above [see pp. 2.36-2.37]. Desrosiers [1999] indicates that INAC is presently viewing the new registry as simply a branch of the Indian Lands Registry. The *First Nations Lands Management Act* makes provision for the development of regulations governing the operation of the registry including a system of priorities. It would appear that an effective land registration system could be developed under this process and that such a system would address many of the concerns with the Indian Lands Registry noted above.

Option 2 - The Land Registry Under the James Bay and Northeastern Quebec Agreements

Description of the Model

The Land Registry under the James Bay and Northeastern Quebec Agreements has been described in some detail above [see pp. 2.15-2.17]. The model might best be described as a registration of deeds system with parcel indexing.

Assessment of the Model Against Defined Criteria

Effective - This model suffers from some structural problems. These difficulties are caused by legislative provisions which lack clarity and by a lack of attention to the issue of priorities between registered and unregistered documents. Specifically, the system is unclear on what priority is secured by registration. In addition, it does not consider the fact of knowledge of prior documents when determining priorities. Thus, it may be unable to prevent some frauds. The concept of provisional and fully registered documents is unclear, particularly since it appears that a fully registered document may be de-registered. The effectiveness of the system is therefore questionable.

Flexible - the model is very much limited in the types of interests which it may record. Significant legislative change would be required for the model to achieve the flexibility which would be required to deal with the potential complexities of aboriginal land tenure systems.

Arbitrates Disputes - the model does have a dispute resolution mechanism, but it is designed to resolve competing claims based on the interpretation of the description of the land involved in title documents. There is no mechanism to resolve competing claims to the same parcel of land.

Deals with Overriding Interests - the model does not deal with overriding interests.

Screen for Ineligible Interests - the model does screen for ineligible interests.

Simple to Use and Operate - from a user point of view, the model is generally simple to use. The form of documents does not appear to be prescribed, and documents may be prepared in the local language. In one respect, however, the model is complex to use. The parties to a document must create a valid description of the parcel or building involved without the assistance of a survey. The structure of the model is not simple. In particular, the concept of dual registration adds significantly to the complexity of the model. Because the model requires documents to be registered once in a local registry and again in a central registry, it is complex to operate. The concept of provisional and final registration also adds to the complexity of the model. The depiction of new parcels on the registry plan is also a complex procedure, often requiring the assistance of Legal Surveys Division staff.

Expensive to Operate - The structure of the model, and particularly the dual registries, makes it an expensive model to operate. If a single aboriginal group were to adopt such a system, there would be no need for dual registries. A significant level of training would be needed for staff to operate such a system.

Accessible - because the model maintains local registries, it is easily accessible to the local population.

Integrated - because the model is based on a large scale plan showing all existing interests, it may be integrated relatively easily with land information systems.

Summary

The Cree/Naskapi Registry offers some limited improvement over the Indian Lands Registry, while some of its components make it less desirable than the Indian Lands Registry. With some legislative amendments, it could be made to meet the required criteria set out above. In some respects, tt is significantly easier to use than the Indian Lands Registry. It does require parties to documents to create descriptions of the parcels involved that meets some unknown standard of clarity. The system is difficult to operate, particularly because of the maintenance of a central and several local offices. This difficulty is somewhat countered by the fact that the existence of local offices makes the system much more accessible to the aboriginal groups which it serves.

Option 3 - The Land Registration System under the Alberta Metis Settlements Legislation

Description of the Model

This model has been described above [see pp. 2.30-2.31]. It is a registration of titles model based on the Uniform Land Titles Act with some interesting additional provisions.

Assessment of the Model Against Defined Criteria

Effective - The model clearly meets all of the requirements of an effective land registration system.

Flexible - The model has been designed to deal with a variety of interests. The scope of the interests which may be registered is defined not by the system itself, but by the legislation which creates the Metis Settlements and by the Metis Settlements General Council. If new types of interests are developed, they may be registered in the system without difficulty.

Arbitrates Disputes - An Appeal Tribunal established by the General Council may hear and resolve many disputes related to title to land.

Deals with Overriding Interests - overriding interests are explicitly dealt with.

Screen for Ineligible Interests - the Regulation does not screen for ineligible interests, it simply declares them void. This may result in the system being unable to prevent some frauds.

Simple to Use and Operate - The model would appear to be relatively simple to use. In particular, documents which do not meet certain technical criteria may be recorded, as opposed to registered, and the priority of the document will be preserved. The system appears to be as easy to operate as is reasonably consistent with it being an effective system. It is a centralized system which deals with all Metis Settlement communities in Alberta. Well-trained staff is required to operate the system.

Expense of Operation - The system will be relatively expensive to operate from the point of view of aboriginal groups. Because it is a centralized system, it does enjoy some economy of scale.

Accessible - One centralized office tends to work against local access to the system.

Integrated - the system can be easily integrated into a wider land information system.

Summary

The Alberta Metis Settlements Registry meets all of the required criteria established above. It does well when measured against all of the other criteria. It would therefore be an attractive choice for an

aboriginal group. The disadvantages of the system are those inherent with all registration of title systems. The system is legislatively complex and requires skilled personnel to operate effectively. A serious drawback is the lack of an effective process to screen for ineligible interests.

Option 4 - Adoption of Provincial/Territorial Systems

Description of the Model

One possible approach to the provision of a land registration system for aboriginal lands is for the aboriginal group in question to simply adopt to adopt the provincial or territorial system which is in effect for the lands surrounding the aboriginal lands. This, of course, would mean that there are thirteen possible models which should be considered. That task is beyond the scope of this report. Instead, the provincial and territorial models will be evaluated in general.

Assessment of the Model Against Defined Criteria

Effective - the models are currently supporting land tenure and development in the bulk of the province or territory in which they exist. They must, therefore, be effective.

Flexible - provincial and territorial models may not be flexible enough to support aboriginal models of land tenure. If that is the case, amendments to the relevant legislation may be required. This may prove difficult as it depends on the cooperation of provincial or territorial governments.

Arbitrates Disputes - most provincial or territorial land registration systems do not contain dispute resolution systems, other than resort to the courts.

Deals with Overriding Interests - because they are in place and dealing with non-aboriginal lands, all systems must currently have some method in place for identifying and dealing with overriding interests.

Screen for Ineligible Interests - none of the provincial or territorial systems will have a process in place for screening for ineligible interests on aboriginal lands.

Simple to Use and Operate - an aboriginal person using a provincial or territorial system will face the same difficulties in using the system as a non-aboriginal. Most of these systems are complicated enough that the assistance of a lawyer is required to effectively use them. From the point of view of a non-aboriginal dealing with aboriginal lands, the provincial or territorial systems will be very familiar to them. Thus, non-aboriginals would feel more comfortable in transactions where they may acquire an interest in aboriginal lands. The provincial or territorial systems are operated by provincial or territorial governments. From the point of view of the aboriginal community, no operational effort is required.

Expensive to Operate - again, the provincial or territorial land registration systems will be operated by the relevant provincial or territorial government. Thus, aboriginal groups would not be concerned with the expense of operation.

Accessible - land titles or registry offices are typically distributed throughout a province or territory. As a result, access by aboriginal groups will be more difficult than in a situation where the system was located on the aboriginal lands. To counter this, most provincial and territorial systems are considering moving to remote access, typically through the internet.

Integrated - most provincial and territorial land registration systems are being integrated into wider land information systems.

Summary

Adoption of a provincial or territorial system of land registration has some distinct benefits for aboriginal groups. Perhaps chief among these are the ease of adopting them (and therefore the avoidance of cost) and the wide acceptance of these systems by the non-aboriginal community. As discussed above, the Sechelt and Nisga'a First Nations have taken this approach for at least some of their lands for these reasons. The chief disadvantages of the systems are that they lack any processes for screening for ineligible interests and for resolving disputes, other than resort to the courts. Additionally, they will lack flexibility, at least initially, although this may be addressed by negotiation with the province or territory.

Option 5 - Federally Supported Generic Land Registration System

Description of the Model

This model is based on the development of a partnership between individual aboriginal groups and the federal government represented by Indian and Northern Affairs Canada (INAC) or possibly Legal Surveys Division [see Nichols et al., 1998 for a discussion of the role of Legal Surveys Division as the broker of information related to Canada Lands.]

The model would be structured along the following lines. The chosen federal body would create a generic land registration system, both the administrative/functional and the legislative components. Individual aboriginal groups would then be free to take that "off the shelf" product, modify it to meet their individual needs, if necessary, and operate the system. The federal government could provide the necessary training and support for an initial period. If the system were designed as a registration of titles system and an assurance fund was part of that system, government could help to establish an assurance fund to support the guarantee of title that such a system would provide. This fund could be supported by fees from many individual systems, and the risk of a serious loss would be spread among several systems. Eventually, a collective of the aboriginal groups might take over management of the assurance fund. Government could operate the system at startup, and if individual groups did not wish to take over management of the system, it could continue to operate the system.

The administrative/functional component of the land registration system would be relatively simple to create as would be the details of the legislative package. More complex would be the actual adoption and adaption of the system by individual aboriginal groups. There are a number of possibilities. As one option, the aboriginal group in question could take the legislative package, make whatever changes would be appropriate to its individual situation, and pass it as one of its laws. As another option, the federal government (potentially with provincial/ territorial agreement) could pass the generic legislation which would provide that individual aboriginal groups could "opt in" to the legislative scheme.

This last approach has some distinct advantages over other choices:

- the level of effort necessary for an individual aboriginal group to design and implement a land registration system is reduced,
- non-aboriginals would be faced with a relatively consistent approach to land registration systems across the country, and
- the issue of funding an assurance fund could be more easily addressed.

Assessment of the Model Against Defined Criteria

Effective - The legislative framework can be carefully designed to address this issue. If a registration of titles system were chosen, the legislation used for the Metis Land Settlements model would be a very

good starting point. If a registration of deeds system is chosen, parcel indexing should be used so as to improve the effectiveness of the system and for the other benefits that result.

Flexible - the generic nature of the model would not restrict individual groups from making changes that were necessary to support whatever land tenure system they opted for.

Arbitrates Disputes - the model can be designed to provide for a dispute resolution system. The dispute resolution system could be designed by individual aboriginal groups to reflect their own cultural approach to that issue.

Deals with Overriding Interests - the system would be designed to deal with overriding interests in general. The specific enumeration of those interests might be up to the individual group.

Screen for Ineligible Interests - the definitions of what are ineligible interests will depend on the land tenure system adopted by each group. For example, some groups may allow conveyances of aboriginal lands to non-aboriginals, while others may not. Thus, the screening process might be set out in general terms in the generic legislation, but it will have to be fleshed out by the aboriginal group as it defines its land tenure system.

Simple to Use and Operate - this will depend on the design of the model. Certainly, the generic model would support ease of use. A group specific model would certainly be the easiest type to operate from a geographic point of view. If government were to operate the system, some of these benefits may be reduced.

Expensive to Operate - If individual aboriginal groups operated their own systems, they would have to devote resources to the operation of these systems.

Accessible - a group specific model would be run at the local level and would be the most accessible model. If the system were to be run by government, remote access could be provided.

Integrated - if the system were based on a registration of titles model it could be easily designed to integrate with a wider land information system. A registration of deeds system would be more difficult to integrate, but if it were parcel indexed, those difficulties would be minimized.

Summary

This type of system may be designed to meet all of the established criteria. It has the additional advantages of providing some homogeneity to land registration systems on aboriginal lands across Canada, allowing aboriginal groups to take over the management of the system if and when they wished to and allowing for the full expression of local land tenure models.

Option 6 - Internal (Private Conveyancing) Systems

Description of the Model

This model contemplates the aboriginal group establishing and maintaining an internal mechanism for tracking who holds what rights to aboriginal lands. The actual mechanism for maintaining the records may vary considerably. A simple model might entail only a database of owners of rights matched to parcels. A more complex model might be based on a computerized geographic information system (GIS).

Assessment of the Model Against Defined Criteria

Effective - the model does not meet the rigorous definition of efficacy adopted in this report. It is important to recognize that such a level of rigor may not be required where the primary tenure model is communal and only limited rights are held by individuals.

Flexible - the model is very flexible in that any interest may be accepted for "registration."

Arbitrates Disputes - there will probably be no dedicated dispute resolution mechanism in such a system. Instead, the general dispute resolution mechanisms in existence in the aboriginal group may be resorted to.

Deals With Overriding Interests - the model does not deal with overriding interests, at least explicitly. Instead, the tenure model itself will have to be relied on to recognize these interests.

Screen for Ineligible Interests - the aboriginal group itself will prevent the original transfer of rights to an ineligible individual. There will be no explicit control over subsequent transfers, other than the aboriginal group may refuse to recognize any subsequent transfers to ineligible individuals.

Simple to Use and Operate - this model is very simple to use and operate.

Expense of Operation - this model is very inexpensive to operate.

Accessible - since the records would be locally maintained, they might be easily accessible. One concern would be whether the records would be public in nature. If not, the accessibility of the system would be severely restricted.

Integrated - the information held by the system might be easily integrated into a wider land information system, especially of the system is computer based and is parcel indexed.

Summary

Internal land registration systems may be a valid option for an aboriginal groups. They have advantages in their low cost and simplicity of operation. Weighted against those advantages are the disadvantages of lack of effectiveness and lack of security for the holders of rights to land. Where rights to land are primarily communal, they may be an attractive option. When rights are more individualized, especially where commercial development occurs, they may not be appropriate.

5.3.5 Summary of Options

The following table summarizes the above material. Again, the assessments are based on the point of view of the aboriginal groups.

Model / Criteria	Indian Lands Registry (as it is currently structured)	Cree/ Naskapi Registry	Alberta Metis Settlement Registry	Adopt Provincial or Territorial Systems	Federally Supported Generic Model	Internal Systems
Type	Registration of deeds with parcel indexing	Registration of deeds with parcel indexing	Registration of titles	Registration of deeds and registration of titles systems	Registration of deeds or registration of titles systems	Private conveyancing
Effective	No - can be improved	No -can be improved	Yes	Yes	Yes	No - may be adequate for communally held lands
Flexible	No	No	Yes	Generally not	Yes	Yes
Arbitrates Disputes	No	No (only for boundary issues)	Yes	No	Yes	No
Deals with Overriding Interests	No	No	Yes	Yes	Yes	No
Screens for Ineligible Interests	Yes	Yes	No - Simply Declares Them Void	No	Yes	No
Simple to Use and Operate	No	To use - yes To operate - no	Moderately	Moderately	Moderately	Yes
Inexpensive to Operate	Yes	No	Moderately	Yes	No - If Operated Locally	Yes
Accessible	Yes	Yes	Less than optimum	Less than optimum	Yes	Yes (unless records are not public)
Easily Integrated	May be	Yes	May be	May be	Yes	May be

5.4 Survey Systems

5.4.1 Introduction

Survey systems have been defined above as "a set of principles, procedures and standards, together with human and technical resources, that are used in the production of cadastral (or legal) surveys. Again, as stated above, the survey system in a jurisdiction has the following functions:

- definition, demarcation, determination and retracement of boundaries,
- subdivision, assembly and reallocation of parcels,
- spatial organization of resources (political, administrative and land tenure boundaries), and
- provision of land information.

The first two of these functions relate to private individuals and the definition of boundaries of individual parcels, while the second two relate to societal concerns.

5.4.2 Characteristics of Survey Systems

There are several characteristics of survey system may be considered when determining which system might be best for a given jurisdiction. Unlike the evaluation undertaken for land registration systems, none of these characteristics might be defined as required. Instead, these characteristics might better be defined as choices which will affect the nature of the survey system, not whether it succeeds or fails. Many of these characteristics are interrelated, and the choices made for one will influence the choices for others.

Numerical vs. Graphical Survey Systems

Simpson [1976, at Chapter 8] divides methods of defining parcels into two categories - numerical systems and graphical systems. Under a numerical system, "(t)he authorized surveyor places monuments which precisely delineate the parcel and carries out a survey of the monuments . . . [p. 143]. Under a graphical system "(t)he State survey authority prepares large-scale maps showing all topographic detail. The Registrar uses these to prepare index maps . . . and these index maps serve to define properties." [p. 144]. The method of parcel definition will have an impact on the choice of a suitable survey system.

It is the position of this report that a survey system can be designed to be flexible enough to generate survey products that are either graphical or numerical, depending on which type of product would be more appropriate for the given circumstances. Some of the existing survey systems that will be examined are capable of generating either type of product. One of the important criteria for examining survey systems will be how flexible each model can be.

Another aspect of flexibility should be that an individual holder of rights would be able to opt for a more rigorous survey than the system defines as the minimum. Thus, even though a graphical survey might be permitted on a parcel, an individual holder may wish to have a fully monumented numerical survey performed. The survey system should be flexible enough to allow this.

Finally, it is also critical that long term viability of a survey system is not sacrificed for short term gain. A survey system must not generate more problems than it solves. Sufficient rigor must be built into the system so that it meets the needs of the land tenure system (and society) that it serves. This balance between flexibility and sustainability must be carefully struck. A graphical system may be advantageous in the short term, but if there is no relationship between the graphical representation of the parcels and what exists on the ground, the system may eventually fall apart.

Boundary Demarcation

There are two issues to be discussed here. First, should newly created parcels actually be the subject of a field survey, and second - if a field survey is carried out, should physical monuments be used to mark the boundaries or would the development of coordinate values for the boundaries be sufficient.

As to the first issue, the question is really whether or not parcels are defined graphically or numerically. If parcels are defined graphically (as discussed above) there is little need for a field survey and monumentation by traditional survey markers. The parcel is defined by reference to a graphic base. Such a system should only be considered if parcels are already defined on the ground by physical features, as in the English general boundary system. To have a graphical system of parcel definition without adequate physical marking of the boundaries is a poor choice. According to Simpson [at p 145] "It may be possible 'to get away with' good marking and indifferent survey or indifferent marking and good survey, but the fatal combination is bad marking and poor survey." It would thus seem obvious that bad marking (where there is no physical feature, either natural or artificial, marking a boundary) should not be combined with poor survey (where there has been no actual survey on the ground.)

The second issue relates to the use of coordinate values only to define boundaries - the so-called coordinated cadastre. A report by Ballantyne et al. [1999] indicates that such a course of action, while perhaps technically possible, would not meet the needs and wishes of most holders of land rights. Case studies set out in Chapter 3 of this report also indicate that physical monumentation of boundaries is desirable.

Integration of Surveys

A cadastral survey conducted under any survey system deals with individual parcels. As such, it may be isolated from any other cadastral survey in the jurisdiction. The concept of integrated surveys is based on the premise that all cadastral surveys should be "fitted into" the survey fabric of the entire

jurisdiction. The traditional approach to this has been to establish networks of control monuments for which coordinate values are known. Cadastral surveys are then "tied into" this network and thus all surveys will be "tied" to all other surveys. Procedures are then adopted to deal with the inevitable conflicts between theoretical and actual positions of boundaries. Benefits seen to come from integrating surveys relate not only to surveys but to the wider aspect of integrating land information in parcel-based land information systems [Zwart, 1980]. As GPS technology has advanced, the problem of the major expense of developing a control network has been addressed to some degree.

Standards

Because surveys involve measurement of physical quantities, no survey can ever be conducted perfectly. There will always be residual errors present in the measurement of any physical quantity. It is possible to rigorously evaluate the quality of the surveyor's work. More precise surveys require the use of more expensive equipment and the expenditure of more time performing measurements. Thus, surveys conducted to higher levels of precision cost more. It may be that the precision required of a survey will be a function of the value of the rights to the land involved. Conventional wisdom states that urban surveys must be more precise than suburban surveys which, in turn, must be more precise that rural surveys. If that is the case, the survey system should only require surveys to be conducted at an "appropriate" level of precision. Some balance must be drawn between cost and precision. A survey system must define standards of precision to be met. Many other survey tasks may be the subject of standards. For example, methods of performing some tasks might be defined. A fully developed system will have defined many standards. Standards are an important mechanism to be used to build flexibility into a survey system. The defined standards must be appropriate to the purpose of the survey and the value of the interest involved. If standards are very strict, the cost of the survey will be out of proportion to those criteria. Little research exists on the issue of whether standards are too high in survey systems across Canada.

If standards have been adopted there should be some methodology to ensure that they are met. Under the provincial and the Canada Lands Survey systems, this may range from a system of systematic checking of survey products by government or professional associations, to quality control measures adopted by each practitioner.

Training and Certification of Survey Practitioners

A survey system will use trained practitioners to undertake surveys. The system should provide some methodology for evaluating the skills and education of individuals and certifying that they are capable of performing to a suitable level of skill. In the survey systems in place in the provinces and on Canada Lands, that responsibility falls to associations of professional land surveyors. These associations are self-governing professional groups. They have been given the mandate to set admission and practice standards (sometimes in consultation with government) and to discipline and perhaps expel members who fail to live up to the required standards of practice. Practitioners will be personally responsible for

errors that they make and will carry liability insurance to ensure that members of the public are protected.

Survey Records

The records collected by practitioners in a survey system form a valuable resource. Some survey products will find their way into a land registration system, and thus, will be public records. Many other records collected by practitioners will not be so easily accessible. Many survey systems rely on the professional responsibility of practitioners to share information that they collect. Others (such as the Canada Lands Survey System) demand that surveyors file their supporting records in some form of an archive.

Dispute Resolution System

Chapter 3 concluded that a boundary dispute resolution system is a very desirable characteristic for a survey system. Such dispute resolution systems may be parcel specific, or may be addressed to whole communities where the boundary fabric has deteriorated. In Canada, there are examples of each. Ontario and New Brunswick have processes designed to resolve individual disputes (the *Boundaries Act* [1990] and the *Boundaries Confirmation Act* [1994] respectively.) In Quebec, the process of bornage is also used to resolve individual disputes. There are also systems designed to restore the boundary fabric for communities. The special survey process under the *Canada Lands Surveys Act* [1985] and the *Land Titles Clarification Act* [1989] in Nova Scotia are examples.

5.4.3 Options for Survey Systems for Aboriginal Lands

From the above discussions, it is possible to isolate several survey systems which might be considered by aboriginal groups for use on their lands. In this section, those options will be defined and the respective advantages and disadvantages of each will be reviewed. The systems that will be discussed are:

- The Canada Lands Survey System;
- Provincial survey systems;
- The Cree/Naskapi survey system;
- Modified Canada Lands or provincial survey systems; and
- Canada Lands Survey System Partnership with Aboriginal Groups.

Option 1 - The Canada Lands Survey System

Description of the Model

The Canada Lands Survey System has been described above [see pp. 2.11-2.12]. It is the baseline model - the model which has been in place on reserve lands and in the territories for many years.

Although primarily a numerical system, some graphical products are available. For example, reference plans may be prepared without the benefit of a field survey, based on the availability of surrounding surveys. Numerical surveys prepared under the system are generally demarcated. An exception would be some surveys of jurisdictional surveys in the north where the surveys are not fully demarcated based on the isolated boundary standard under the system. Postponement of demarcation is not permitted. Replacement of demarcation by coordinate values may be permitted as noted above. Progress has been made toward the integration of surveys.

An extensive suite of standards has been developed for the system. The recent launching of the Association of Canada Lands Surveyors (ACLS) has seen a shift of training and certification from Legal Surveys Division to the ACLS. The ACLS is considering quality assurance processes as well. As discussed above, standards have been shown to be flexible.

An extensive inventory of survey records is maintained in the Canada Lands Survey Records archive.

The system provides for a community wide boundary settlement process under the special surveys provisions of the *Canada Lands Survey Act*. In addition, employees of Legal Surveys Division have acted as informal arbitrators of boundary disputes on aboriginal lands [Isaacs, 1999].

The advantages/disadvantages of adopting the CLS survey system may be set out as follows:

Advantages	Disadvantages
Since the system in the one currently used for reserves and in the territories, there will be little effort expended in transition. The system is well known to aboriginals and there is a significant inventory of existing survey information already archived in the system. The system works well with the Indian Lands Registry and the territorial land registration systems. The standards are well developed and have been shown to be flexible. The system has taken steps toward supporting an integrated land information system. The system is supported by a professional association of land surveyors, the ACLS. That association will provide a framework for training/licencing of land surveyors and a system of quality assurance for their work. Although the system is a primarily a numerical one as opposed to a graphical one and surveys are generally monumented, the system has shown flexibility and in some instances, graphical survey products are permitted. The system provides a dispute resolution system for communities where boundary fabric has deteriorated. In addition, informal dispute resolution has been utilized. The system is homogeneous across all Canada Lands. It has been able to adopt flexible standards while still maintaining the economy of scale and other benefits of being a national system.	The system may not work well with provincial land registration systems. For example, the Land Title Office in British Columbia requires surveys that are to be registered to be completed under the British Columbia survey system. The processes set out for conducting a survey are somewhat more complicated than other systems (for example, the requirement that instructions for survey be obtained and the confirmation process.) The system demands that practitioners receive a significant amount of education and training before becoming Canada Lands Surveyors. At present, there are few aboriginals who have received that education and training. Because of the significant amount of education and training of survey practitioners, they system may be more expensive than other systems. The system provides no formalized dispute resolution system for individual parcels.

Option 2 - Adoption of Provincial Survey Systems

Description of the Model

One of the options open to aboriginal groups whose lands are located within provincial boundaries is to opt for the existing provincial survey system. There are, of course, ten individual provincial survey systems. There are differences between individual provincial systems, but those differences are generally more a matter of degree than of kind. With the exception of some minor variations, the essential characteristics of each system are generally structured along similar lines. The situation in Quebec has been discussed separately above [see pp. 2.52-2.53].

The systems are not markedly different from the Canada Lands Surveys system. The main differences would be in process (for example the requirement for instructions and the confirmation process) and the collection of filed notes and other materials in the Canada Lands Survey Records archive. The systems are primarily numerical systems. A few do provide for preparation of graphical products. For example, the Alberta system provides for descriptive plans, which are graphical in nature.

Most systems require monumentation. In some provinces (Alberta and British Columbia) monumentation may be postponed for a period of time to allow construction efforts to be completed [Ballantyne, 1999]. This process is designed to protect monuments from construction activities. The Alberta system is considering a pilot project where monumentation would be replaced by coordinate values. Where graphical plans are prepared, monumentation is avoided.

Few of the systems are integrated in the formal sense of the word. Many require that land surveyors reference their work to some coordinate system.

Most systems have extensive standards which have been developed by the professional group and/or government. In all systems, extensive training of practitioners is required. The educational qualifications are generally equivalent to an engineering degree followed by a period of articles under a practitioner and further province-specific examinations. Certification is provided by the professional associations. Practitioners are generally required to carry liability insurance [Dobbin, 1999].

Survey records are generally maintained by individual practitioners. Access to these records is provided to other practitioners based on professional responsibilities.

A few provinces have developed dispute resolution systems. Parcel specific systems exist in Ontario under the *Boundaries Act* [1990] and in New Brunswick under the *Boundaries Confirmation Act* [1994]. A community wide system exists in Nova Scotia under the *Land Titles Clarification Act* [1989]. The Quebec system uses the process of *bornage* to settle uncertain boundaries.

The following table summarizes the advantages and disadvantages of aboriginal groups opting to use the provincial survey systems for their lands:

Advantages	Disadvantages
The systems work well with the provincial land registration systems.	The systems may not work well with the Indian Land Registry.
The standards are well developed.	The systems have not been designed to deal specifically deal with aboriginal lands and interests therein. Their focus is on non-aboriginal lands and they may therefore be less responsive to factors which affect aboriginal lands.
Some of the systems have moved toward the integration of survey information with land information systems.	The systems demand that practitioners receive a significant amount of education and training before becoming a provincial Land Surveyor. At present, there are few aboriginals who have received that education and training.
The systems are supported by professional associations of land surveyors. These associations will provide a framework for training/licencing of land surveyors and may provide a system of quality assurance for their work.	Because of the significant amount of education and training of survey practitioners, the systems may be more expensive than other alternatives.
Some systems are supported by dispute resolution systems for individual disputes (Ontario, Quebec and New Brunswick.) and others are supported by community wide dispute resolution systems (Nova Scotia.)	Some systems provide no dispute resolution system for individual parcels or for communities.
	Little flexibility of standards is evident across the systems than the Canada Lands Survey System. They are generally numerical as opposed to graphical and surveys are generally monumented. In some instances, “graphical surveys” are available (for example, descriptive plans under the Alberta system.)
	Adoption of provincial systems would result in the loss of homogeneity of the survey system across aboriginal lands across Canada.

Option 3 - The Cree/Naskapi Survey System

Description of the Model

A distinct survey system has been established for the Cree/Naskapi category 1A and 1A-N lands under the James Bay and Northeastern Quebec Agreements. These lands are Canada Lands, and thus, the Canada Lands Survey System would normally apply, however, an alternative system has been developed. The system has been described above [see pp. 2.17-1.18].

Some of the factors which influenced its design were [after Sasseville, 1997]:

- The system had to support a land tenure system where different rights were permitted to exist in land and in buildings located on that land;
- The system was required to support the creation of parcels which did not conform to the cadastral lots of the underlying Quebec survey system;
- The system was designed to be "easy to use, flexible and capable of quickly identifying and locating rights in land and buildings by methods other than the conventional surveying performed by a land surveyor . . . [where] . . . logistics makes the cost of surveying prohibitive in relation with the interest to be recorded."; and
- The system was designed to be "carried out by a local land registrar without detailed knowledge of cartography, surveying, identification and positioning of rights on maps, or updates of plans."

It is graphically based, that is, the definition of new parcels is based not on field surveys, but on large scale mapping. At the core of the system is a series of 1:2000 maps of populated areas in the subject area. The large scale maps are then used to prepare plans for single parcels which are the subject of a transaction. As new parcels are created by subdivision (or by construction of a building), they are referenced to existing parcels or buildings. The extent of the new parcel is then depicted on the large scale registry plan maintained by the registrar. This depiction may be performed by the local land registrar or the central registrar, alone or with the assistance of Legal Surveys Division staff. If the holder of a right wishes, they may have a ground survey conducted by a Canada Lands Surveyor.

No standards appear to have been developed for the graphical "surveys" performed by the Registrar. Registrars are provided with training.

A dispute resolution system exists where the Registrar reviews conflicts related to the depiction of parcels on the large scale maps.

The following table summarizes the advantages and disadvantages of this system:

Advantages	Disadvantages
The lack of field survey saves time and expense for each individual transaction. Because the interests granted under the land tenure system are always less than absolute ownership, it may be that the lower standard of survey is appropriate to the need. The existence of large scale mapping would support integration of the survey data with other data in an integrated land information system. Much less training of personnel is required. A dispute resolution system is available.	The lack of monumentation may lead to situations where the graphical representation of a parcel does not coincide with the actual location of the parcel on the ground. There is the potential for a significant level of confusion and disputes over boundaries. The system appears to require the assistance of Legal Surveys Division staff in many instances to depict parcels on land registry plans. The system may not work well with other land registration systems. Standards do not appear to have been set for the creation of parcels other than the Registrar may reject a transaction if he or she believes that the parcel is not well defined. This leads to uncertainty in individual transactions. There is no provision for compensation to injured parties. An error in the system may cause significant damage to the holder of a right and that holder may have no remedy. No survey records exist. Therefore, none may be archived for future reference. Where parcels are concerned (as opposed to buildings) the system violates the recommendation of Chapter 3 that physical monumentation should be used to define parcels.

Option 4 - Modified Canada Lands Survey or Provincial Systems

Description of the System

Two of the possible options for survey systems discussed above have been adoption of the Canada Lands Survey System or the relevant provincial system. This option discusses the possibility of an aboriginal group adopting one of those systems, but modifying some of its characteristics with a view to addressing its identified disadvantages.

The following characteristics of the Canada Lands Survey System and of provincial survey systems might be changed to make them more appropriate for use by aboriginal groups:

- Refining standards of survey to more closely reflect the land tenure system. For example, most aboriginal groups appear to be considering communal tenure for some or all of their lands and granting lesser interests to individuals (aboriginal or non-aboriginal.) Many provincial land registration systems acknowledge that lesser interests may require less in the way of survey. For example, in Nova Scotia, a subdivision plan is not required for the granting of a leasehold interest unless the lease might extend beyond twenty years. This, however, is an all or nothing approach. Perhaps a more appropriate response to a lesser interest would be to continue to require a survey, but to require a survey conducted to a lower standard. This is in no way intended to suggest that interests in aboriginal lands are of any less importance to the holders of them than to the holders of interests in non-aboriginal lands. It simply is an attempt to match the quality of the survey to the quality of the interest. In fact, it has been argued that the standards imposed on surveys on non-aboriginal lands are too high [Dobbin, 1999].
- Making it possible for less qualified practitioners to perform some survey tasks. Under the Metis Settlements Legislation in Alberta, the provincial survey system is adopted in large part. The one significant difference is that under the Metis Settlements land registration system, a non land surveyor may prepare descriptive plans, while under the Alberta system, only an Alberta Land Surveyor may do so. A conversation with staff in the land registration office indicates that many descriptive plans are prepared by a knowledgeable draftsperson in the office. This concept might reasonably be extended to other survey processes, for example, basic subdivision of existing parcels.
- Add community-based dispute resolution systems. Many of the survey systems discussed above lack dispute resolution systems. Those that do contain such systems are based on principles that may not reflect aboriginal notions of the dispute resolution process. The existing survey systems might be modified to include a culturally appropriate boundary dispute resolution process.
- Control of the systems might be localized. The survey systems discussed above are subject to primary control by government departments (federal or provincial) and professional survey associations. This might not be considered appropriate by aboriginal groups. It may be possible for control mechanisms for the survey systems to be transferred to the aboriginal groups

themselves. Thus, the group would be responsible for many of the control functions such as setting and enforcing standards of survey, managing survey resources and others.

Assessment of the Model

The following table identifies the advantages and disadvantages of adopting a modified Canada Lands or provincial survey system:

Advantages	Disadvantages
This model would result in survey systems that were more appropriate to the needs of the aboriginal groups. Many of the disadvantages of the original survey systems could be eliminated. Specifically: • standards may be made appropriate to the specific needs of the group; • many survey tasks might be performed by aboriginal practitioners; • appropriate dispute resolution systems might be adopted, and • control of the system would be with the group, not with some distant government department.	Significant human and financial resources are required to set up and operate a survey system. The effort may be out of proportion to the benefits, especially if land transactions are not frequent on the land base in question. There is a potential for liability if the system does not operate correctly and a user suffers a loss. If the standards are significantly changed, there may be difficulty in using a survey product with the land registration system of a province or the Indian Lands Registry. If standards are significantly changed for individual aboriginal groups, a loss of homogeneity of survey systems across Canada would result.

Option 5 - Canada Lands Surveys System in Partnership with Aboriginal Groups

Description of the Model

The discussions above have highlighted several points:

- a survey system that is tailored to the individual land tenure system in a jurisdiction is very desirable,
- the development and operation of a survey system is an extremely complicated and labour intensive undertaking,
- certain aboriginal groups presently lack the trained personnel necessary to establish and operate a survey system, and
- for certain groups, especially where there was not a significant amount of surveying activity, the effort that would be required to establish and operate a survey system might be out of proportion to the benefits that might result.

A survey system which took account of these factors would be an attractive choice for aboriginal groups. The model considered in this section attempts to address these issues.

The model takes as a starting point the Canada Lands Survey System. That system is presently used on the vast majority of aboriginal lands and a significant quantity of survey information exists for those lands which was prepared under the system. It is the logical system to use as a starting or reference point.

From that starting point, two distinct processes may occur. The first is the adoption of the system by individual aboriginal groups. The term "adoption" is meant to imply that the aboriginal groups may take over responsibility for management of the system or part of the system on their own lands. The second process is adaption. The term "adaption" is meant to imply that the Canada Lands Survey System may be changed by individual aboriginal groups to reflect their specific requirements as defined by the land tenure system adopted by them. It must be emphasized that these two processes may occur. Individual groups may not wish to invest scarce human and financial resources on these processes. The alternative would be for them to simply opt to accept the status quo.

If an aboriginal group decides that it wishes to adopt and/or adapt all or part of the Canada Lands Survey System, a significant level of assistance can be offered to them through the development of partnerships between the aboriginal groups, the Association of Canada Lands Surveyors (ACLS) and the Legal Surveys Division (LSD). Within those partnership relationships, ACLS and LSD might provide:

- training and certification for aboriginal field surveyors and survey system managers at the level deemed appropriate by the aboriginal group;

- advice on development of standards and procedures appropriate to the group;
- advice on dispute resolution mechanisms, maintenance of survey records, quality assurance processes and many other aspects of a survey system; and
- the provision of any component of the survey system which the aboriginal group decides that it does not want to provide for itself.

This model has some distinct advantages for aboriginal groups. Primarily, it allows them to assume responsibility for the survey system if they so desire and provides a mechanism under which the appropriate levels of training are delivered to them before they assume that responsibility. It allows them to continue to use a system with which they are familiar, but to adapt it to their individual needs as those needs are defined. It allows them to define the level of responsibility that they will assume and the timetable for that process.

Assessment of the Model

It is possible to identify in general terms some of the advantages and disadvantages of adopting this model:

Advantages	Disadvantages
The model is based on the Canada Lands Survey System, a model which most aboriginal groups are familiar with and under which a significant level of survey infrastructure related to aboriginal lands already exists. The system would enable aboriginal groups to determine the speed at which they assume responsibility for survey systems if they choose that route. A gradual assumption of responsibility would minimize transition difficulties and allow time for expertise to be transferred to the groups. The ability to "customize" the survey system would mean that the system would most closely match the requirements of the aboriginal groups. These customized systems would best reflect the values and requirements of individual aboriginal groups and the land tenure system that they adopt. A number of tasks could be undertaken on behalf of the aboriginal groups by ACLS and Legal Surveys Division. Examples would be training and certification, development and maintenance of standards, quality assurance, and maintenance of survey records. Since the ACLS and Legal Surveys Division must perform these tasks already, there should be an economy of scale and costs to the aboriginal groups might be minimized.	It may be difficult to use products generated by a highly modified survey system in a provincial land registration system or the Indian Land Registry. Some loss of homogeneity of survey systems across Canada would result from the adoption of a number of modified systems.

5.4.4 Summary of Options

The following table summarizes the reviewed survey systems and how they meet the above criteria:

Model / Criteria	Canada Lands Survey System	Provincial Survey Systems	Cree/Naskapi Survey System	Modified CLS or Provincial System	Partnership Model of Canada Lands Survey System
Land Tenure Model	Variable - tenure systems applicable to surface and subsurface rights on reservations, National Parks, territories and offshore	Generally private rights to surface and subsurface	Tenure system supports transfer of limited rights in land and/or buildings	Variable - may be designed to work with any land tenure system	Variable - may be designed to work with any land tenure system
Type of System - Graphical or Numerical	Numerical and graphical	Primarily numerical - some graphical surveys are permitted in some systems	Graphical	Numerical (with some graphical products available)	Canada Lands Survey System as baseline - groups may modify as they see fit. The result may be a mixture of numerical and graphical products.
Boundary Demarcation	Generally yes for numerical surveys - no for graphical surveys.	Generally yes - demarcation may be postponed in some circumstances	For land, no, unless requested and paid for by holder of rights. For buildings, the building itself provides demarcation.	Yes for numerical surveys. No for graphical surveys.	Same as for Canada Lands Survey System unless individual groups modify it to meet their needs.
Integration of Surveys	Some	Generally not - some exceptions	Graphically	May be if deemed appropriate	May be integrated as the groups see fit

Standards	Developed by Legal Surveys Division and Association of Canada Lands Surveyors	Generally developed by professional associations. Provincial governments may set standards for surveys done on their behalf	Limited - for example, no definition of standards for depiction of parcels on registry plan	May be developed by aboriginal group or may be adopted from originating model	Starting point will be the Canada Lands Survey System standards. Individual groups may modify these to meet their needs.
Training & Certification of Practitioners	Responsibility of Association of Canada Lands Surveyors	Responsibility of provincial professional associations	Registrars responsible for system, training of surveyors not an issue	May be undertaken by aboriginal groups	Starting point will be under ACLS. Partnerships for training efforts will be undertaken.
Dispute Resolution System	Community wide under special survey provisions	Some parcel specific, some community wide, some not at all	Yes - provided by registrar	Yes if deemed appropriate	May be adopted as the individual groups see fit.
Survey Records	Most filed in Canada Lands Survey Records	Many retained by practitioners and shared with other practitioners based on professional responsibilities	Not applicable unless ground survey performed - then Canada Lands Survey Records	Yes if deemed appropriate	Starting point will be the Canada Lands Survey Records - individual groups may take over this responsibility as they see fit.

5.5 Conclusions

The purpose of this chapter has been to set out a range of options for land registration and survey systems for aboriginal lands. Within the chapter, and indeed, throughout this report, it has been emphasized that land registration and survey systems must be designed to support the land tenure system in place in a jurisdiction. It is now clear that many aboriginal groups have or will have the power to determine the land tenure system that best suits their needs and culture. Because the nature of those land tenure systems is not known at present, the options suggested for land registration and survey systems have been general in nature and the criteria for evaluation of those systems have been based in fundamental principles, not in specific recommendations. Even where very specific models of existing systems have been examined, the examination has focused on approach and not content.

We recognize that many decisions about land registration and survey systems may be made based on criteria that we have not discussed in detail, for example, political or financial realities. Certainly, the development and adoption of a land registration or survey system by an individual aboriginal group would involve a significant investment of human and financial resources. We profess no expertise in these areas. We can only set out the fundamentals and hope that these are taken as a valid point of departure.

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