

THE ROLE OF THE LAND SURVEY PROFESSION OF NAMIBIA
IN THE FIELDS OF LAND USE POLICIES AND IN LAND TENURE.

Land can be considered as a piece of space, a platform on which most human activity takes place or as a reservoir of natural resources. Judged by the enormous population growth of the human race, it has provided us with a secure and stable environment in which continuous evolutionary development was possible. However, we have reached a point where the use of our land has become one of the most sensitive issues on which the survival of our species depends.

The rapidly growing population puts ever increasing demands on the land and everything that depends on the land. The fact that land in all its different facets is a fast diminishing limited per capita resource needs to be solidly embedded in the awareness of every single human being.

In order to ensure that we keep the limited land resources in a sustainable and healthy condition, vast volumes of data need to be collected and processed to arrive at wise decisions based on reliable information. We need to monitor the effects of our land use policies in order to avoid irresponsible actions that result in the further degradation of the land on which, and from which, we live. This can only be achieved by quantifying the elements which describe the condition of our land. Furthermore, this process of continuous monitoring has to lead us to the formulation of ever improving land use policies. We are doomed to extinction if we do not maintain and develop our skills to face ever changing conditions under which the land is used. The great challenge lies in the creation of a structure by means of which a secure and stable balance can be maintained between our use of the land and the condition of the land.

In view of the above, the discipline of land surveying has an important contribution to make. At a recent meeting the General Assembly of the International Federation of Surveyors has adopted the following definition for a surveyor: 'A surveyor is a professional person with the academic qualifications and technical expertise to practise the science of measurement; to assemble and assess land and geographic related information; to use the information for the purpose of planning and implementing the efficient administration of the land, the sea and the structures thereon; and to investigate the advancement and development of such practices.' This definition is very general and it is internationally based. The detailed tasks which each national professional survey organization assigns to itself depends to a large extent on national land use policy. However, the above definition covers the scope of any national survey activity and it forms the framework of the professional services which land surveyors offer to their nations.

Traditionally, land surveyors of Namibia have directed their activities primarily to the maintenance of our cadastral system and to the mapping of the country. Namibia is very fortunate in having a well established national mapping system which has been efficiently maintained and expanded by the staff of the Surveyor General and the privately practising land surveyors. All cadastral surveys are currently done in accordance with legislation which guarantees a very high standard. This has resulted in a solid system of security of title which is recognised by banking institutions accepting land as security for monies lent to land owners. While this feature of security of title only benefits owners of land parcels which have been properly surveyed and registered in the Deeds Registry, other forms of legal rights to land exist in our country. The traditional forms of land ownership in those areas of the country which fall outside the regions of the commercial farming areas and proclaimed towns are also recognized but they do not enjoy the same level of security because they are locally administered and not nearly as scientific

cally documented as is the case with freehold ownership. These variations in land ownership standards are a result of land use policies which have not been uniformly applied to the country as a whole. It is interesting to note how much of an impact the nature of land ownership has had on the way people use their land. To my knowledge not a single private property outside the commercial farming area has to this date been registered in the Deeds Registry. The implication of this disparity is far reaching because a vast number of unregistered land owners have no access to mortgage bonds and hence the evident lack of development capital. This is a matter which will definitely have to be addressed by land use policy makers and the advice that the survey profession could make in this regard is significant. It must be borne in mind that while the survey profession plays important roles in the implementation and maintenance of land use policies, it cannot make decisions of a political nature. It can only supply supportive services to land use policies. The cadastral aspect of surveying deals with the following issue: WHO has WHAT RIGHTS over which LAND? This set of information forms part of a given land use policy as much as of future land reform policies. The survey profession of Namibia is well equipped with the necessary skills and infrastructure that are essential to the tasks in this respect. Our country has vast undeveloped regions in which pioneering survey methods long since forgotten in well established industrial countries are still being applied. The Namibian survey fraternity enjoys a good reputation amongst southern African surveyors for the creativity with which they have adapted their survey methods to local conditions. Furthermore, most of the practising land surveyors know vast regions of the country and collectively they carry valuable information about the land and the people who live thereon. It would be wise to draw on this pool of knowledge during the formulation of land reform policies.

The legislation according to which cadastral surveys are carried out in Namibia needs urgent attention by the government. The Institute of Land Surveyors of Namibia, together with the office of the Surveyor General, has been trying to have the South African legislation, currently still in force in Namibia, replaced by our own legislation. A bill with numerous revised drafts has been passed between government officials and the council of our Institute for a period of approximately ten years. Yet no politicians have deemed this matter important enough to give it some serious and urgent attention. Our efforts in this regard since Independence have so far also been fruitless and we hope that the proceedings of this conference will bring about more attention to this matter. The current situation provides for no official channels of communication between the body of professional Namibian Land Surveyors and government. Hence there is no vehicle on which negotiations in terms of procedures, standards of work, minimum professional qualifications, tariff of fees and other matters arising from time to time can take place. The current situation hampers our initiatives to Namibianise our activities and to adapt to developments since Independence.

Before leaving the cadastral aspects of land surveying in Namibia, I wish to make a couple of remarks on the performance of the survey profession in this particular field of activity. The wise foresight of the Surveyor General has ensured that since he has taken office in 1981, all surveys in all parts of the country have been carried out in accordance with the Land Survey Act. This means that all pieces of land, including those falling outside the commercial and municipal areas which were surveyed since 1981 can be registered in the Deeds Registry. The result is that no re-surveys of land subjected to the disparity of title deed quality need to be done. This measure will save the country considerable amounts of money. In terms of current legislation, boundary disputes are solved by either the land surveyor, or failing this, the Supreme Court. To my knowledge, not a single boundary dispute has reached the courts of Namibia. This is

a convincing record which clearly demonstrates the quality of service land surveyors have been rendering over a long period of time in their role as guardians of boundaries. Furthermore, local land surveyors have played important roles in the demarcation of Namibia's international borders. It can be safely stated that Namibia has a survey profession of international standards and we hope that the Government will continue to make good use of this national asset.

While the field of cadastral surveying deals with the security of boundaries defining the extent of various rights over landed property, the land survey profession of Namibia also has important roles to play in other fields of survey. As mentioned earlier, a good land use policy is based on reliable information about the land. Land surveyors are trained to collect data and to conduct measurements in the field with the purpose of processing such data and measurements into information which describes the land under survey. The most common product of this nature is in the form of a map which can be easily read by planners and other professionals concerned with development.

Survey technology has made enormous advances during the past two decades. Today's Namibian land surveyor would have been envied by his colleagues who started mapping the country about a hundred years ago. The most significant development in the field of measurement has been the introduction of Electromagnetic Distance Measurers (EDM) with which distances of up to 50 km can be measured to a very high degree of accuracy. All private practices in Namibia make successful use of these instruments. On the side of data processing, the introduction of affordable computing facilities has brought about an enormous increase in productivity. A number of practises in our country have invested in modern computer aided drafting systems which enable them to present their survey results very efficiently. The only classical field of survey technology which has not been implemented to date by a local firm is that of photogrammetry by means of which maps can be produced from aerial photographs. The reason for this is that this technology is highly capital intensive and that Namibian land surveyors have been up against very stiff competition from companies based in South Africa. However, the necessary skills to apply such technology are available in Namibia and I am sure that the establishment of a locally owned photogrammetric firm will become a feasibility once economic conditions improve.

The most exciting happening at the moment in the survey world is the arrival of two technologies which can be combined to give unprecedented rates of production. On the side of measurement science this is in the form of Global Positioning Systems (GPS) which is a satellite based method of determining positions on the surface of the earth. Worldwide, this technology is very young and affordable instrumentation has only been on the market for about a year in Southern Africa. In spite of the high purchase price of this instrumentation, it has already been applied with great success here in the rural regions of our country, thus placing Namibia well into the international state of the art community of surveyors. In fact, it is hoped that the use of this technology can be exported to other countries in Africa. At least there will be no need to import this efficient method of surveying. The ease with which a large amount of survey data can be collected at fast rates in the field will inevitably result in a faster rate of data generation which in turn will put more pressure on the processing side of the survey industry. However, some local firms are already concerning themselves seriously with the purchase of so called Geographic Information Systems (GIS). This technology facilitates enormous data processing capacities which are combined with excellent computer graphics in order to produce maps which show the relationships between different data sets. Complicated analyses like environmental impact studies, agricultural potential assessments, population distribution patterns, national disease migration patterns, land tenure patterns and other investigations

regarding the use of the land have now become a realistic feasibility due to this technology. The combination of the above two technologies will play a major role in providing policy makers with concise, reliable and useful information regarding the state of our land and the survey profession of Namibia is looking forward to cooperate with the government in meeting this important challenge.

It is hoped that the government will find enough funds to equip the Surveyor General's Office with the necessary infrastructure to enable that office to act as an institution which controls, coordinates and directs all activities relating to the collection, processing, storing and dissemination of all land related information. The Survey Profession of Namibia is looking to the Surveyor General for guidance and direction in this field. It would be of great advantage to land use policy makers, if the government assisted the Surveyor General in terms of the relevant equipment and especially in the recruitment of suitably qualified experts who can deliver this important service to the people of Namibia. We live in the age of information technology and we should make the best possible use of the planning tools available to us. A great many mistakes and unnecessary expenses can be avoided if the planners of our future are equipped with easily accessible and reliable information.

In conclusion, I wish to stress again the urgent need to give attention to the matter of the Namibian Survey Legislation as well as the Deeds Registries Act. As long as these important pieces of legislation have not been transformed into authentic Namibian Acts, it will be virtually impossible to consolidate the skills needed to implement any future land use policies and to improve on the current situation.

On behalf of the Institute of Land Surveyors of Namibia I wish to thank the organisers of this conference for affording us the opportunity to introduce our role in Namibian society to the public. We have been around for a long time but the nature of our work does not attract much publicity and it may be for this reason that so little interest exists in the furtherance of survey legislation in Namibia. Hopefully this can also be ascribed to the consistently good service the Land Survey Profession has been rendering to Namibia. We are looking to the future with anticipation for a lively and regular interaction with the public and the private sector. We are ready to continue with our good work. We accept the responsibilities which the planning of our future calls for.

N.E.VOLKMANN
PRESIDENT OF THE INSTITUTE OF LAND SURVEYORS OF NAMIBIA.
MAY 1991

- R. Jell, M. 1986 : "Why Communal Land Tenure Survives in Swaziland". *Ceres* 1983 : The FAO Review, vol. 19, no. 5, September-October 1986.
- United Nations, FAO 1979 : **Report of the World Conference on Agrarian Reform and Rural Development**. Rome. 12-20 July 1979.
- United Nations 1962 : **Progress in Land Reform**. Third Report. New York.
- United Nations 1976 : **Progress in Land Reform**. Sixth Report. New York.
- Weiner, D : "Agricultural Restructuring in Zimbabwe and South Africa". *Development and Change*, vol. 20, no. 3, July 1989.
- Wortman, S en Cummings, jr., R W (ed.) 1978 : **To feed this world - the challenge and the strategy**. The John Hopkins University Press, Baltimore & London.