# The Cost of Land Registration: a Case Study of Cost Efficiency in Namibia

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# The cost of land registration: a case study of cost efficiency in Namibia

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## Summary

In the light of the global discussion on reducing public and private expenditure on cadastral processes and services, this article reviews the transaction costs of land registration, based on data gathered in Namibia. The data show a large differentiation in the types of costs incurred in the process, as well as various levels of cost recovery. In addition, the degree to which delays in the operational registration processes influence the total cost to land developers and landowners is reviewed.

## Introduction

Cadastral or land administration organisations claim to fulfil a vital role in society by providing information on land and real estate and on associated rights and right holders (Henssen, 1995), as well as by guaranteeing titles (in the case of positive systems). This function owes its importance to the premise that such information leads to better land tenure security and a more transparent land market, which in turn leads to improved land development. Various recommendations made during the World Bank discussion forum (2001) and the ITC workshop on capacity building in land administration (Groot & van der Molen, 2001), as well as in the Bathurst Declaration (FIG, 1999), show that there is a need for land administration actors and organisations, amongst others, to improve their performance within the context of cost efficiency and effectiveness.

The organisations performing the land administration functions are under increasing pressure from global development concerns that are guided by principles of 'good governance'. Governance as defined by the United Nations Development Programme (UNDP) in 1997 is the exercise of economic, political and administrative authority to manage a country's affairs at all levels. Although there is no universal definition of what 'good' governance is, any government should address the processes and structures for better political and socio-economic relationships between the state and the society, whereby the authority is exercised in such a way that the rights and stakes of the citizens are protected. This means that good governance comprises the mechanisms, processes and institutions through which citizens carry out their rightful activities as well as seek redress, relief, and policy changes from government. Transparency, participation, accountability and effectiveness are the key characteristics of good governance. The open Internet initiative Digital Governance (Digital Governance, 2002) gives an overview of further information in this respect.

Based on these good governance objectives, government organisations now aspire to increase efficiency, deregulate, sometimes privatise, work on a cost-recovery basis and adjust to accommodate new customer requirements for information products. Cadastre 2014 (Kaufmann & Steudler, 1998) is one of several FIG documents addressing the issue of government reform in the case of cadastres. The document concludes that in the field of land information provision the aim of cadastres everywhere should be to develop operations that recover the full cost. Although the document mainly addresses the expectations of cadastres in developed countries, some of the considerations and conclusions are of a general nature and therefore also valid for developing countries.

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Both the review of cadastral organisations in Cadastre 2014 and the benchmarking study carried out by Steudler et al. (1997) show that when it comes to the issue of cost there are still very few fully cost-recovering land administration organisations in the world. Experience in the Netherlands has proven that part of the organisational cost improvements can be realised by re-engineering the business processes on the basis of more accurate cost allocations for activities. As a result the internal efficiency of the organisation does seem to improve, although the basic premise that such a re-engineering effort will also lead to better and more effective land administration has yet to be proven. Particularly in the context of most developing countries, where in some cases less than 1% of land is under a formal registration system (see Fourie, 2001), the statement that more cost-efficient cadastres will lead to more effective land management practices is still an untested assumption.

It is therefore necessary to make the cost of cadastral operations and activities more concrete, transparent and identifiable. This article takes a closer look at various types of cost, using a case study from Namibia. With particular focus on the formal land surveying process for land registration, it reviews some of the problems that occur when estimating and calculating cost items in land administration processes. Such a review is deemed necessary in order to ascertain whether increasing the efficiency of cadastral surveying and information supply results in more cost-effective land administration, and to determine what land registration is costing where, when and whom. To put this in an international perspective, some basic statistics for Namibia (from UNDP, 2001; Transparency International, 2001) are given in Table 1 for comparative purposes.

These figures indicate that Namibia is representative of medium-income developing countries in a state of transition, with a relatively small population and where so-called 'facilitation money' is not the main cost driver of the processes.

## Review of transaction costs

Various types of cost can be distinguished during the land registration process to arrive at the final product: a fully registered parcel. The overall cost can be referred to as *transaction costs*. Transaction costs can generally be defined as all costs associated with obtaining and using a product, apart from the actual purchase price paid.

In this article transaction costs will refer to all costs associated with the process of registering a subdivision or transferring land – in other words, all costs somehow incurred, but not necessarily relating to the purchase price/cost of land (e.g. the cost of transferring a property, including estate agents' commission, conveyancing and bond registration fees, and transfer and stamp duties, but excluding the cost of the land itself and the cost of any improvements (e.g. engineering services) on the land).

Such transaction costs can be divided into the following categories:

1) Professional fees. These are fees that have to be paid to (often 'registered', in some countries referred to as 'licensed') professionals as part of the registration process, and include:
   a) Town planner's fees
   b) Surveyor's fees
   c) Conveyancer's fees.
   All these fees comply with fixed tariffs prescribed in acts such as the 1993 Land Survey Act.

2) Government fees. These are costs associated with the statutory operations of registration itself at governmental offices and include all the internal costs of cadastral and land administration organisations. In the case of cost-recovery mechanisms, all or some of these costs might be recovered through fees and charges for products and services. These fees are then paid/covered by the buyers of the information and/or the beneficiaries of the information/service. At present, however, not all such costs are fully recovered and therefore the cost for

individual landowners to submit and register a subdivision is made up of prescribed fees only, including:

a) Deeds Office: examination fees
b) Surveyor General's Office: examination fees
c) Land Administration and Control Body, Local Authority, Townships Board and Namibia Planning Advisory Board (NAMPAB): application fees.

3) "Taxes" levied on the subdivision and transfer of immovable property. These include:
   a) Local authority (usually municipal) endowment fees, normally calculated as 7.5% of the value of a newly created parcel[1]. This charge is not intended to recover the cost of the transaction itself but can be seen as a kind of local authority tax to cover the cost of the additional infrastructure load caused by the subdivision.
   b) Transfer and stamp duties. These fees are levied by government on the transfer of immovable property. They are not intended to recover the cost of the transfer transactions but can be used by government for any other purposes.

4) Investment or opportunity costs. These generally relate to interest paid to banks by individuals or private land developers while the registration process is ongoing. Opportunity costs refer to the interest lost by the developer while capital is caught up in a property development project. Obviously such costs are neither part of the prescribed registration process itself nor a stipulation of any act.

Usually internal cost/performance evaluations only incorporate cost type (2). Very often the fees charged by national governments do not cover the actual operational costs in terms of salaries, equipment, etc. When benchmarking the external effectiveness of cadastral organisations and evaluating the financial implications for land beneficiaries, actors in the land market and individuals living formally or informally on and from the land, cost types (3) and (4) are taken into account.

[1] The official word in Namibian legislation is 'erf'.

## Reducing cost: general policies and implications

Namibia, like most other southern African countries, is undergoing a process of land reform that covers both tenure legislation and land registration procedures. The acts, ordinances and policies that may be affected by these reforms in the field of land surveying and land registration include the 1993 Land Survey Act; the 1993 Professional Land Surveyors, Technical Surveyors and Survey Technicians Act; the 1999 Flexible Urban Land Tenure Act (draft); the 1937 Deeds Registries Act; the 1963 Townships and Division of Land Ordinance (as amended by Act 28 of 1992); and the National Housing Policy. All of these prescribe the various steps of the production processes, and often include accepted fees for certain activities. Although this may imply a very transparent distribution of costs over all beneficiaries, it also shows that any attempt to improve cost efficiency will involve the need to adapt such acts and/or regulations.

Such adaptation is in line with government reform policies aiming at *good governance* and the effective use of public funds. In a number of countries this is translated into effective deregulation where needed, cost control, transparency and the optimisation of government spending. Although perhaps still in an initial stage, Namibia is no exception to these general principles. The Namibian Public Service Charter states that one of the general principles includes:

*'Value for money: providing efficient and economic public services within affordable resources.'*

As a result, the land reform and good governance policies should both have an effect on how cadastral information is

produced and provided. Whereas previously cadastral organisations were often largely funded by government budgets and organised through public administration, now there is a global trend towards deregulation, privatisation and/or the introduction of cost-recovery mechanisms. So far the reaction of cadastral organisations has been to focus largely on the internal cost aspects. Cadastre 2014 (Kaufmann & Steudler, 1998) , the document summarising the major development of cadastral organisations for the future cadastres, foresees:

- *Cadastre 2014 will be cost-recovering! (statement 6)*
- *that the Cadastre 2014 institution will have an economic structure that enables it to recover investment and maintenance costs (conclusion 4)*
- *improved customer services with increased efficiency and improved cost/benefit ratio.*

Although the document was written mainly for developed countries, reforming the cadastral operations in developing countries also involves addressing the key questions of who in society will bear the burden of economic costs, and who will bear the production costs to be recovered. It is not clear whether solely internal organisational efficiency savings are to achieve the improvement in the cost/benefit ratio of cadastres or whether the organisational changes should aim at external economic benefits in the information society. In this sense there is still some ambivalence and heterogeneity when it comes to measuring the performance of efficiency and/or effectiveness.

Furthermore, within the context of developing a national geospatial infrastructure, the question arises of whether it would be possible to estimate any transaction cost reductions attributable to the timely availability of foundation data at reasonable cost. If a government is funding the gathering and management of foundation/framework data, including cadastral data, should there be an attempt to recover costs against the demand from parties outside government? Or, if cost recovery is not a primary policy, not even in the longer term, what mechanisms can be used to ensure that a data producer using public money is producing products for which there is a real demand?

When such questions have been addressed, there still remains the additional question of how to translate the newly developed land policies in Namibia into practical laws and regulations. Christensen (1999), de Vries (2000) and Bayer (2000) provide some details on what the implications would be for surveying regulations, procedures and the profession. The 1999 draft bill on urban flexible land tenure aimed at defining in legal terms what these could be, partly to avoid pitfalls similar to those found in the old procedures. A pilot project by Christensen and Højgaard (1997) showed that a technical change in procedures reduced the time and associated direct labour (i.e. surveying) costs specified in the land survey regulations. Moreover, business process simulation studies by Onchaga (2000), for example, have identified possibilities in re-engineering procedures, developing likely alternative processes and improving survey performance. In essence, this leads to the conclusion that although the internal cost efficiency of improved technical operations can be successfully re-engineered, there will also be an effect on the statutory procedures. What direct cost effects these changes might have externally – on transaction and investment costs, amongst others – requires examination.

## Case study: registration and transaction costs in Namibia

To analyse the cost of the operational activities related to registration, the process of registering a subdivision in Namibia (one of the most common registrations requiring cadastral surveys) was reviewed. Often this subdivision is necessary to make individual parcels available to the land market or to upgrade informal settlements. The total number of

subdivisions processed by the Directorate of Survey and Mapping (DSM, Ministry of Lands, Resettlement and Rehabilitation) for the budget year 2000-2001 is given in Table 2.Communication with the DSM (Surveyor General's Office) indicated that the current backlog is estimated to be some six months, which, if related to Table 2, would reflect at least some 2000 parcels of formal registration. Christensen and Højgaard (1997) describe a situation relating to the informal settlement registration of some 10,000 parcels, reflecting some 10,000 potential individual landowners who either cannot develop the land at all (not yet available) or have no security of tenure (in the case of informal settlements). The particular issue is to establish the relationship between backlog and cost.

In order to describe these cost implications, three cases were reviewed. In each case, the complete throughput procedure was analysed and the associated costs for each individual step were calculated. The cost figures refer to the year 2000 and might have changed slightly during the past year, particularly with regard to the high-income case. The three cases dealt with the following:

1) Subdivision of a private 1800 $m^2$ erf into two parts, 900 $m^2$ each, in Ludwigsdorf, a high-income residential area in Windhoek; the sales price of each parcel was N$ 150,000.
2) Subdivision of a 24,455 m² residential block parcel into 37 new private parcels, average size 661 $m^2$ each, for a private development.
3) Government upgrading of a 247,773 $m^2$ informal settlement (excluding streets) in Windhoek by subdivision and the proclamation of a new township. This case originally contained several block parcels reserved for public open space, business, residential and undetermined; however, to simplify calculations it was assumed that the whole settlement was subdivided into 826 parcels of 300 m² each.

The cases are based on the formal registration process in urban areas in Namibia, and are presented from the point of view of the land developer and the landowner. The cases are considered representative based both on the results of Table 1 and on discussions with professionals in Namibia in the fields of land survey, town planning, land development, real estate and legal conveyancing. Various types of costs are included (see Table 3).

The duration of the registration process for each of the three cases presented was verified by a survey and by discussion with the various parties involved in the process. The duration is therefore a figure of experience rather than a prescribed minimum or maximum duration. Details of the actual sequential process steps are shown in Figures 1, 2 and 3. The duration is partly influenced by the general backlog at the DSM, and partly by the delay incurred by each party involved in the actual process.

Details of duration, actors and fees are given in Tables 4 to 6 (all values in Namibian dollars (N$); rate N$ 8 = US$ 1 in July 2001). Given the various cost items and the duration as evaluated for each case, the cost estimates for the three cases are presented in Tables 7, 8 and 9. A summary is given is Table 10.

## Analysis of case study results

The tables show that current (national) government fees do not recover the costs (for human resources, equipment, overheads, facilities, etc.) incurred by the government in the registration process. This would imply that, in a hypothetical case where a policy of full cost recovery were in place, the actual fees for registration would probably increase. The implication of such an increase would certainly not be in the interest of land developers and/or landowners – particularly if the backlog in transaction administration were to remain. If this backlog were reduced, an increase in fees equivalent to a decrease in interest cost would not change the current expected cost to land developers/landowners.

In contrast to the national administration, local authorities achieve significant cost recovery. Although the endowment fees are intended to mitigate the increased cost in providing infrastructure services to the new subdivisions, it can be expected that such fees also contribute to the administrative cost of approving such subdivisions.

The time taken at the DSM to approve the survey diagrams owing to the backlog (estimated at some six months in most cases) seems debatable. The activities necessary to check a particular diagram obviously do not take a net period of four to six months. During the process, the DSM estimates that approximately 80% of surveys are returned to the private surveyors for additional work before actual approval. The reasons vary from 'incomplete work' to 'inappropriate measurement procedures'. In most cases, the reasons for rejection are based on examination and survey policies, not on regulations. A counter-argument is, however, that current regulations and policies do not cater for developments in technology. The survey results may be sufficiently accurate but not in accordance with the regulations and policies as applied by the DSM. As a result, technological developments could lead to the shorter duration of survey activities, but examination policies do not always allow or foster the incorporation of these technologies.

The duration of actual surveying activities by private land surveyors does not seem to be a major bottleneck in the overall registration process. In other words, a more cost-efficient technical surveying process will not foster a more cost-efficient land registration process, given the current institutional situation. A survey of a township of around 800 parcels should take about three months, at a cost of approximately N$ 360 per parcel. Included in this survey are survey procedures and techniques that are almost 'foolproof'. It is believed that most of the survey examination procedures currently applied by the DSM could be eliminated altogether, thereby reducing the examination time to no more than three weeks. This would reduce not only the overall transaction cost (i.e. reduction in opportunity cost from the developer's/owner's perspective) but also internal DSM costs (fewer examination procedures and shorter cycle times would inevitably reduce organisational costs).

Quality control aspects to be considered are as follows:

- Each new survey is always based on some earlier survey, often carried out by a different surveyor. Incorrect or inaccurate surveys will therefore always be detected by surveyors referring to earlier surveys.
- Spot checks can be made by examining certain surveys if it is thought that a particular surveyor does not produce acceptable work.
- The registration procedures of land surveyors, technical surveyors and survey technicians are strictly controlled by law and by the statutory control body SURCON. Disciplinary action should be taken against surveyors found guilty of unprofessional work.
- Land surveyors, like most other professionals, should take full responsibility for the quality of their work. It is believed that if DSM examination of surveys were limited, land surveyors would produce higher-quality work as then they themselves, not the DSM, would carry out the quality control.

Existing survey procedures (as prescribed by the Land Survey Act and Regulations) and the above quality control measures, together with the advanced survey technology used by most surveyors, are considered sufficient to protect the landowner against incorrect surveys.

Calculation of the opportunity cost for the establishment of new townships (by government) is not as exact as for private developments. Investment cost is more difficult to quantify as the land is not usually bought (i.e. paid for) by the

government. For the upgrading and/or formalisation of most informal settlements, the sales price of parcels (erven) is normally based on cost recovery for infrastructure and engineering services. Funds can be obtained from various sources, but it is assumed that the cost of capital (interest rate on borrowed capital) is also in the order of 15% per year. There is a high level of acceptance amongst informal settlers for unserviced parcels or parcels with only rudimentary services – and a willingness to pay for them – indicating a desire for security of tenure (TRP Associates, 1996). It is therefore expected that by the registration and sale of parcels government could recover a significant portion of the capital invested in establishing townships. Interest cost here can therefore be treated similarly to the way in which it is dealt with for private developments. In the case dealing with township establishment, where the relevant procedures were completed without any obstacles, it can be seen that the total interest costs are in the order of N$ 4300 per parcel (67% of the total transaction cost for case 3).

In this case, it was assumed that an informal settlement was subdivided into parcels of 300 m² each. In most cases, however, the average parcel size in informal settlements is less than 300 m². This has been a major obstacle in the process of approving of township layouts. Under the terms of the National Housing Policy, subdivisions of less than 300 m² are not allowed in Namibia. Consequently, over the past few years, the proclamation of a number of townships has been delayed by several years because the Ministry of Regional and Local Government and Housing has rejected township layouts for failing to comply with the terms of the National Housing Policy. Not only does this have a major impact on the total transaction cost of such projects, it also has negative social, economic and environmental cost implications. These are difficult to quantify but can be considered even higher than the interest cost paid.

As for the registration of informal settlements, governments seem to make negative profits. The crucial issue here is what is the acceptable balance between a societal benefit (increased tenure security) and government cost performance for registration. Clearly, an improved procedure would decrease the interest cost.

Another major factor involves government investment costs in infrastructure and other construction and engineering services. When upgrading informal settlements, these costs are often not included when calculating the purchase price of the land itself, yet they are clearly an investment cost that must be evaluated in the land delivery process. In most cases, the cost of infrastructure is included. Quite often, the land is considered 'free' and the purchase price of the land is calculated as the total cost of services/infrastructure, divided by the number of parcels.

The fees for town planners are a direct result of the current legislation prescribing the land registration process. Table 3 shows that at various stages in the process fees are incurred for town planners, obviously raising the overall costs for the registration process. A thorough performance analysis based on the actual activities in the registration process would probably reveal these costs in more detail. Nevertheless, it is already clear that town planners can levy fees at each of the various stages of the same registration item.

Land development is considerably affected by the interest costs stemming from the length of the process. As might be expected, this practice does not stimulate land transactions aiming at the further development of land tracts. Private land developers are often discouraged by the long transaction cycle time for the subdivision of land. Reduction in cycle time would therefore undoubtedly result in increased private property development.

The issue of who is paying for what is one that needs further consideration. At the end of the day, it is always the potential landowner who will pay the cost of the

land registration process required for the individual plot, either directly through fees or indirectly through taxes. The cost recovery of governmental agencies, however, seems to differ from that of other actors in the process. The DSM recovers hardly any costs out of the fees charged for its work, whereas the municipal agencies do tend to work more on a cost-recovery basis (indirectly, through endowment payments on subdivisions). The town planners play a vital role here.

The transaction cost arising from the effort and time needed to find information (in registers and/or databases) has not been explicitly addressed. It is, however, considered part of the exercise of surveying (retrieval of coordinates, map sheets, survey diagrams, etc. by private surveyors at the Surveyor General's Office, for example) and conveyancing (searching the registers), while more indirectly it may be part of the town planning costs. The fact that in Namibia there are relatively few organisations or companies that maintain large databases or registers makes the issue of where to locate information a minor one; data mining costs are not significant.

## Concluding remarks

Whereas improving the performance of land administration organisations seems to focus on improving internal process efficiency and cost recovery, the examples of cost issues in land registration procedures in Namibia show that performance improvement should include not only land survey procedures but also approval and checking procedures by various institutions. The role and costs of town planners in this respect may require further review and discussion. Moreover, the levels of cost recovery are not the same for all the different process steps. Although local government has set fees that are more in line with the cost of the actual activities, the national authority has so far failed to do so. If, however, national authorities aim to implement certain land policies, cost recovery should not perhaps be the primary aim of the operations. The benefits to landowners and the increased land tenure security could be of greater public importance than the actual cost of such an exercise.

Internal cost performance should also be related more to external cost performance. This means that organisational performance indicators will need to be somehow related to economic and societal indicators with a cost impact. In this context it is clear that cost in itself must be seen in relation to the asset on which cadastres store information. The value of land is obviously much greater than the value of the actual information on land. A slight deviation in the land market may influence the eventual cost to landowners and developers more than a serious delay in the registration process. Still, the fact that these delays do take place may sometimes result in a bringing a particular land development project to a halt.

The case of Namibia may not be relevant for all developing countries. It shows, however, that post-colonial countries have inherited certain regulations that seem similar to those of most developed countries but which may no longer be appropriate. The conclusions on cost for developed countries may therefore not be applicable to developing countries. As a result, the criteria for good governance will need to be based on a comprehensive model that includes both internal and external performance indicators.

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| Table 1. Statistics for comparative purposes | | |
|---|---|---|
| | Namibia* | Compare |
| Human Development Index (1-48 = high development, 49-126 = medium, 126-162 = low) | 111 | Australia: 2<br>Fiji: 67<br>Papua New Guinea: 122 |
| GDP per capita | US$ 5468 | Australia: 24,574<br>Fiji: 4799<br>Papua New Guinea: 2367 |
| Population (in millions) | 1.7 | Similar to:<br>Slovenia: 2.0<br>Lesotho:2.0<br>Bhutan: 2.0 |
| GDP (in billions) | 3.1 | Slovenia: 20<br>Lesotho: 0.9<br>Bhutan: 0.4 |
| Corruption Perception Index (10 = non-corrupt, 0 = very corrupt) | 5.4 | Australia: 8.5<br>Italy: 5.5<br>Indonesia: 1.9 |
| * The Namibian dollar has a one-to-one exchange rate with the South African rand (ZAR); this rate has been fluctuating heavily in the past year, from 7.5 in January 2001 to 12 in January 2002; in this article for convenience a fixed rate has been used: US$ 1 = Namibian $ 8. | | |

| Table 2. Annual statistics of cadastral survey results | | | | |
|---|---|---|---|---|
| **Month** | **Survey diagrams** | **Survey records** | **General plans** | **No of parcels** |
| March 2000 | 43 | 14 | 1 | 268 |
| April 2000 | 37 | 17 | 2 | 150 |
| May 2000 | 75 | 20 | 2 | 453 |
| June 2000 | 125 | 30 | 2 | 27 |
| July 2000 | 85 | 33 | 3 | 67 |
| Aug 2000 | 120 | 27 | 5 | 519 |
| Sept 2000 | 63 | 16 | 3 | 393 |
| Oct 2000 | 34 | 14 | 2 | 174 |
| Nov 2000 | 32 | 15 | 3 | 414 |
| Dec 2000 | 40 | 16 | 4 | 284 |
| Jan 2001 | 37 | 16 | 5 | 759 |
| Feb 2001 | 42 | 18 | 2 | 63 |
| March 2001 | 39 | 27 | 5 | 618 |
| | | | | |
| Total | 772 | 263 | 39 | 4189 |

Table 3. Cost and fees in land registration

| Cost items | Description |
|---|---|
| Purchase / sales price | These purchase prices reflect realistic (market) land values (in N$) to complete the calculations; sales price of parcels under formal registration: N$ 10,000 per parcel in new townships, N$ 70,000 per parcel if already under formalised registration |
| Registration fees | Includes (prescribed) municipal and township board (TB) costs and endowment fee of 7.5% of sales price |
| Stamp and transfer duties | As prescribed by 1993 Transfer Duty Act (taxation levied on the acquisition of any property by any person in any way) and 1993 Stamp Duty Act (form of government tax on every instrument referred to in schedule 1 of the act) |
| Interest cost | Incurred during the registration process; an interest rate of 15% per year. |
| Survey costs | As prescribed by the 1993 Land Survey Act |

Table 4. Case 1: Subdivision of a residential parcel (erf) into two portions (one portion and remainder) (currency Namibian dollars)

| | | Professional fees | | | Time |
|---|---|---|---|---|---|
| **Activity** | **Done by:** | **Consultant** | **Surveyor** | **Conveyancer** | **(days)** |
| 1.1 Apply to municipality | Consultant | 1,800 | | | 14 |
| 1.2 Approve application | Municipality | | | | 35 |
| 1.3 Apply to townships board | Consultant | 600 | | | 7 |
| 1.4 Approve TB application | Townships Board | | | | 45 |
| 1.5 Obtain subdivision certificate | Townships Board | | | | 14 |
| 1.6 Survey | Land Surveyor | | 2,283 | | 14 |
| 1.7 Lodge survey | Land Surveyor | | (144) | | 1 |
| 1.8 Approve survey | SGO | | | | 120 |
| 1.9 Pay endowment fee | Developer | | | | 1 |
| 1.10 Prepare transfer deeds | Conveyancer | | | 4,808 | 14 |
| 1.11 Pay transfer/stamp duty | Buyer | | | | 1 |
| 1.12 Lodge transfer deeds | Conveyancer | | | (50) | 1 |
| 1.13 Approve deeds | Deeds Office | | | | 14 |
| 1.14 Receive payment (sales price) | Bank/Buyer | | | | 1 |
| **TOTAL** | | 2,400 | 2,139 | 4,758 | 282 |
| **TOTAL PER PARCEL (ERF)** | | 1,200 | 1,070 | 2,379 | |
| **Percentage of total** | | 3% | 5% | 13% | |

Table 5. Case 2: Subdivision of a residential block parcel into 37 new parcels (35 residential) (currency Namibian dollars)

| | | Professional fees | | | Time |
|---|---|---|---|---|---|
| **Activity** | **Done by:** | **Consultant** | **Surveyor** | **Conveyancer** | **(days)** |

| | | | | | |
|---|---|---|---|---|---|
| 2.1 Layout design & applications | Town Planner | 15,579 | | | 15 |
| 2.2 Approve application & layout | Municipality | | | | 35 |
| 2.3 Apply to NAMPAB/TB | Town Planner | (94) | | | 7 |
| 2.4 Need & desirability approval | NAMPAB | | | | 45 |
| 2.5 Advertise for objections | Townships Board | | | | 45 |
| 2.6 Approve TB application | Townships Board | | | | 45 |
| 2.7 Obtain subdivision certificate | Townships Board | | | | 14 |
| 2.8 Survey | Land Surveyor | | 24,543 | | 30 |
| 2.9 Lodge survey | Land Surveyor | | (1,488) | | 1 |
| 2.10 Approve survey | SGO | | | | 180 |
| 2.11 Pay endowment fee | Developer | | | | 1 |
| 2.12 Register general plan | Conveyancer/DO | | | 794 | 30 |
| 2.13 Prepare transfer deeds | Conveyancer | | | 66,955 | 21 |
| 2.14 Pay transfer/stamp duty | Buyer | | | | 2 |
| 2.15 Lodge transfer deeds | Conveyancer | | | (1,750) | 1 |
| 2.16 Approve deeds | Deeds Office (DO) | | | | 15 |
| 2.17 Pay purchase price | Bank/Buyer | | | | 1 |
| **TOTAL** | | 15,485 | 23,055 | 65,999 | 488 |
| **TOTAL PER (SALEABLE) PARCEL** | | 442 | 659 | 1,886 | |
| **Percentage of total transaction cost** | | 3% | 5% | 13% | |

Table 6. Case 3: Township establishment: subdivision and proclamation of a new township (currency Namibian dollars)

| | | | | | |
|---|---|---|---|---|---|
| | | **Professional fees** | | | **Time** |
| **Activity** | **Done by:** | **Consultant** | **Surveyor** | **Conveyancer** | **(days)** |
| 3.1 Layout design & applications | Town Planner | 80,727 | | | 45 |
| 3.2 Township establishment | Town Planner | 110,928 | | | 45 |
| 3.3 Approve application & layout | Municipality | | | | 35 |
| 3.4 Apply to NAMPAB/TB | Town Planner | (1,672) | | | 7 |
| 3.5 Need & desirability approval | NAMPAB | | | | 45 |
| 3.6 Advertise for objections | Townships Board | | | | 45 |
| 3.7 Approve TB application | Townships Board | | | | 45 |
| 3.8 Obtain subdivision certificate | Townships Board | | | | 14 |
| 3.9 Survey | Land Surveyor | | 293,363 | | 90 |
| 3.10 Lodge survey | Land Surveyor | | (20,422) | | 1 |
| 3.11 Approve survey | SGO | | | | 180 |
| 3.12 Open township register | Conveyancer/DO | | | 994 | 30 |
| 3.13 Proclamation of township | Townships Board | | | | 30 |
| 3.14 Prepare transfer deeds | Conveyancer | | | 602,914 | 45 |
| 3.15 Pay transfer/stamp duty | Buyer | | | | 5 |
| 3.16 Lodge transfer deeds | Conveyancer | | | (41,296) | 1 |
| 3.17 Approve deeds | Deeds Office (DO) | | | | 20 |
| 3.18 Receive payment (sale) | Bank/buyer | | | | 1 |
| **TOTAL** | | 189,983 | 272,941 | 562,613 | 684 |
| **TOTAL PER (SALEABLE) PARCEL** | | 230 | 330 | 681 | |
| **Percentage of total transaction cost** | | 5% | 8% | 16% | |

Table 7. Transaction cost for case 1 (currency Namibian dollars)

| Activity | Government fees | | | Taxes | | Paid by: | | Time (days) | Interest cost | TOTAL COST | TOTAL PER PARCEL |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | TB | SGO | Deeds | Munic. | GRN | Developer | Buyer | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |
| 1.1 | | | | | | -1,800 | | 14 | -1,218 | -3,018 | -1,509 |
| 1.2 | | | | | | 0 | | 35 | -3,044 | -3,044 | -1,522 |
| 1.3 | 22 | | | | | -622 | | 7 | -609 | -1,231 | -615 |
| 1.4 | | | | | | 0 | | 45 | -3,914 | -3,914 | -1,957 |
| 1.5 | | | | | | 0 | | 14 | -1,218 | -1,218 | -609 |
| 1.6 | | | | | | -2,283 | | 14 | -1,218 | -3,501 | -1,750 |
| 1.7 | | 144 | | | | 0 | | 1 | -87 | -87 | -43 |
| 1.8 | | | | | | 0 | | 120 | -10,436 | -10,436 | -5,218 |
| 1.9 | | | | 7,500 | | -7,500 | | 1 | -87 | -7,587 | -3,793 |
| 1.10 | | | | | | | -4,808 | 14 | -1,218 | -6,026 | -3,013 |
| 1.11 | | | | | 15,880 | | -15,880 | 1 | -87 | -15,967 | -7,983 |
| 1.12 | | | 50 | | | | 0 | 1 | -87 | -87 | -43 |
| 1.13 | | | | | | | 0 | 14 | -1,218 | -1,218 | -609 |
| 1.14 | | | | | | | 0 | 1 | -87 | -87 | -43 |
| Total | 22 | 144 | 50 | 7,500 | 15,880 | -12,205 | -20,688 | 282 | -24,525 | -57,419 | **-28,709** |
| Total per erf | 11 | 72 | 25 | 3,750 | 7,940 | **-6,103** | **-10,344** | | **-12,263** | **-28,709** | |
| % of total | 0% | 0% | 0% | 13% | 27% | -21% | -36% | | -42% | -100% | |

Table 8. Transaction cost for case 2 (currency Namibian dollars)

| Act. | Government fees | | | Taxes | | Paid by: | | Time (days) | Interest cost | TOTAL COST | TOTAL PER PARCEL |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | NAMPAB/ TB | SGO | Deeds | Munic. | GRN | Developer | Buyer | | | | |
| | | | | | | | | | | | |
| 2.1 | | | | | | ( 15,579) | | 15 | ( 7,014) | (22,593) | ( 646) |
| 2.2 | | | | | | 0 | | 35 | (16,366) | (16,366) | (468) |
| 2.3 | 94 | | | | | 0 | | 7 | (3,273) | (3,273) | (94) |
| 2.4 | | | | | | 0 | | 45 | (21,042) | (21,042) | (601) |
| 2.5 | | | | | | 0 | | 45 | (21,042) | (21,042) | (601) |
| 2.6 | | | | | | 0 | | 45 | (21,042) | (21,042) | (601) |
| 2.7 | | | | | | 0 | | 14 | (6,547) | (6,547) | (187) |
| 2.8 | | | | | | (24,543) | | 30 | (14,028) | (38,572) | (1,102) |
| 2.9 | | 1,488 | | | | 0 | | 1 | (468) | (468) | (13) |
| 2.10 | | | | | | 0 | | 180 | (84,170) | (84,170) | (2,405) |
| 2.11 | | | | 50,000 | | ( 50,000) | | 1 | (468) | (50,468) | (1,442) |
| 2.12 | | | 50 | | | (844) | | 30 | (14,028) | (14,872) | (425) |
| 2.13 | | | | | | | (66,955) | 21 | (9,820) | (76,775) | (2,194) |
| 2.14 | | | | | 109,900 | | (109,900) | 2 | (935) | (110,835) | (3,167) |
| 2.15 | | | 1,750 | | | | 0 | 1 | (468) | (468) | (13) |
| 2.16 | | | | | | | 0 | 15 | (7,014) | (7,014) | (200) |
| 2.17 | | | | | | | 0 | 1 | (468) | (468) | (13) |
| Total | 94 | 1,488 | 1,800 | 50,000 | 109,900 | (90,966) | (176,855) | 488 | (228,193) | (496,015) | **(14,172)** |
| Total per erf | 3 | 43 | 51 | 1,429 | 3,140 | (2,599) | (5,053) | | **(6,520)** | **(14,172)** | |
| % of total | 0% | 0% | 0% | 10% | 22% | -18% | -36% | | -46% | -100% | |

Table 9. Transaction cost for case 3 (currency Namibian dollars)

| Act. | Government fees | | | Taxes | | Paid by: | | Time in days | Interest cost | TOTAL COST | TOTAL PER PARCEL |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | NAMPAB/ TB | SGO | Deeds | Munic. | GRN | Developer | Buyer | | | | |
| | | | | | | | | | | | |
| 3.1 | | | | | | -80,727 | | 45 | -156,348 | -237,076 | -287 |
| 3.2 | | | | | | -110,928 | | 45 | -156,348 | -267,276 | -324 |
| 3.3 | | | | | | 0 | | 35 | -121,604 | -121,604 | -147 |
| 3.4 | 1,672 | | | | | 0 | | 7 | -24,321 | -24,321 | -29 |
| 3.5 | | | | | | 0 | | 45 | -156,348 | -156,348 | -189 |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 3.6 | | | | | | 0 | | 45 | -156,348 | -156,348 | -189 |
| 3.7 | | | | | | 0 | | 45 | -156,348 | -156,348 | -189 |
| 3.8 | | | | | | 0 | | 14 | -48,642 | -48,642 | -59 |
| 3.9 | | | | | | -293,363 | | 90 | -312,697 | -606,060 | -734 |
| 3.10 | | 20,422 | | | | 0 | | 1 | -3,474 | -3,474 | -4 |
| 3.11 | | | | | | 0 | | 180 | -625,394 | -625,394 | -757 |
| 3.12 | | | 50 | | | -1,044 | | 30 | -104,232 | -105,276 | -127 |
| 3.13 | | | | | | 0 | | 30 | -104,232 | -104,232 | -126 |
| 3.14 | | | | | | | -602,914 | 45 | -156,348 | -759,263 | -919 |
| 3.15 | | | | | 61,943 | | -61,943 | 5 | -17,372 | -79,315 | -96 |
| 3.16 | | | 41,296 | | | | 0 | 1 | -3,474 | -3,474 | -4 |
| 3.17 | | | | | | | 0 | 20 | -69,488 | -69,488 | -84 |
| 3.18 | | | | | | | 0 | 1 | -3,474 | -3,474 | -4 |
| Total | 1,672 | 20,422 | 41,346 | 0 | 61,943 | -486,062 | -664,858 | 684 | -2,376,496 | -3,527,416 | **-4,271** |
| Total Per erf | 2 | 25 | 50 | 0 | 75 | -589 | -805 | | **-2,877** | **-4,271** | |
| % of total | 0% | 1% | 1% | 0% | 2% | -14% | -19% | | -67% | -100% | |

Table 10a. Overview of costs and duration for the three cases

| | Total time (days) | Total transaction costs per parcel (N$) | Interest cost as percentage of total cost (per parcel) | Professional fees as percentage of total cost |
|---|---|---|---|---|
| Case 1 | 282 | 28,709 | 42 % | 21 % |
| Case 2 | 488 | 14,172 | 46 % | 21 % |
| Case 3 | 684 | 4,271 | 67 % | 29 % |

Table 10b. Overview of costs and duration for the three cases

| | Government fees as percentage of total cost | Municipal taxes as percentage of total cost | Transfer and stamp duties as percentage of total cost |
|---|---|---|---|
| Case 1 | 0.004 % | 13 % | 27 % |
| Case 2 | 0.007 % | 10 % | 22 % |
| Case 3 | 0.02 % | 0 % | 2 % |

Figure 1. Subdivision of parcel (erf) into less than 11 portions

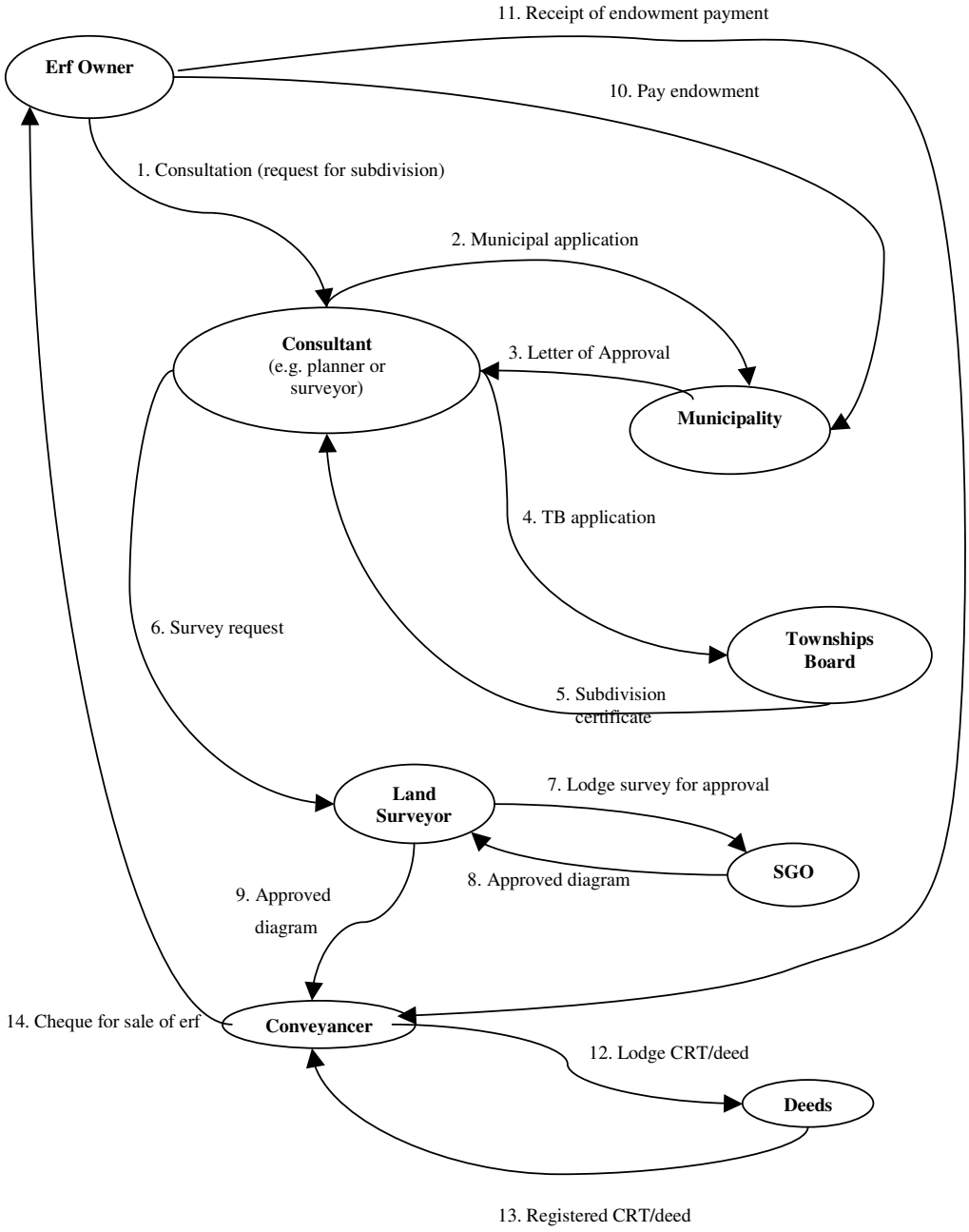

Figure 2. Subdivision of more than 10 portions in an existing township

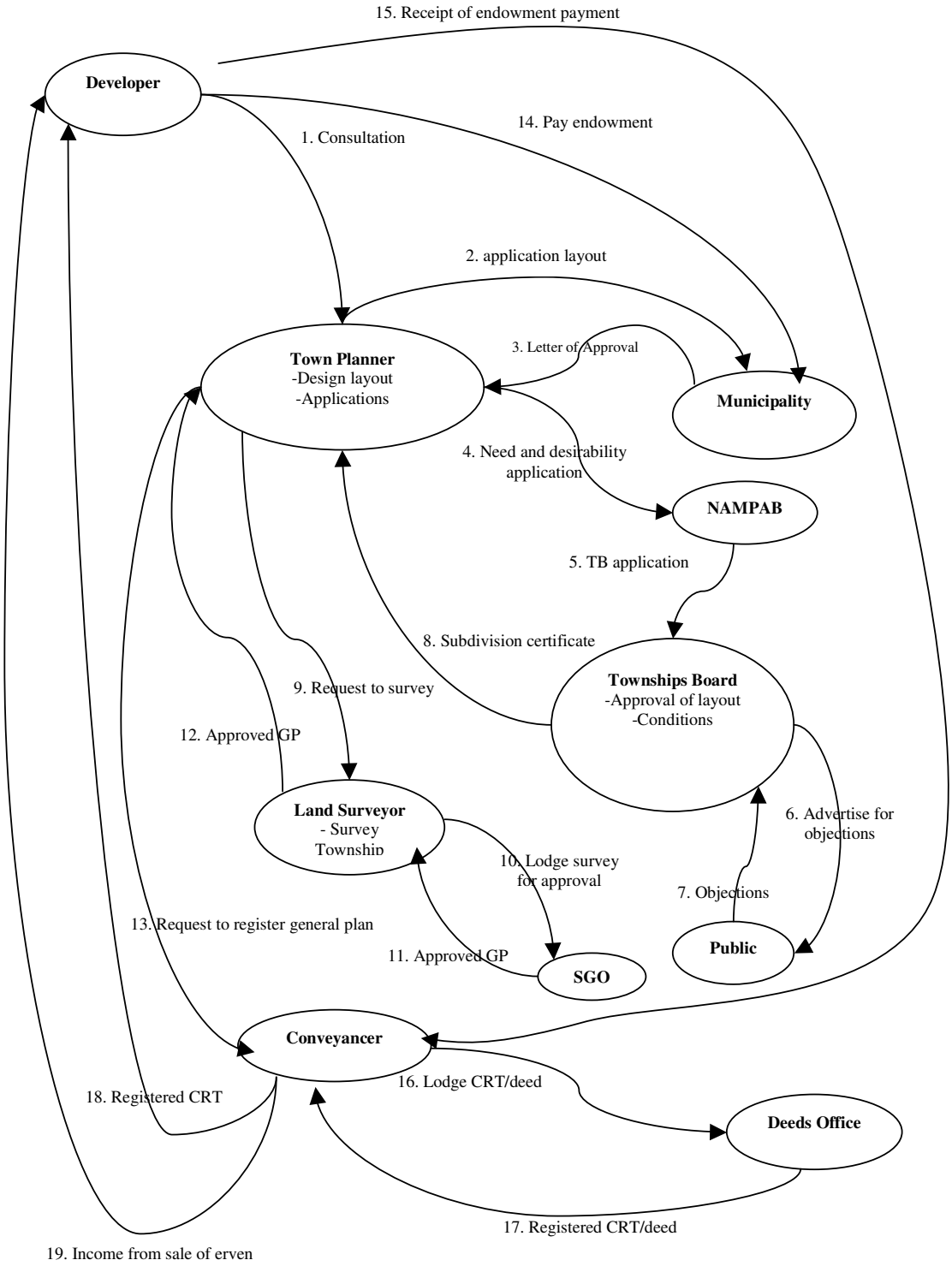

Figure 3. Subdivision and Proclamation of Township