UNCONVENTIONAL APPROACHES TO LAND ADMINISTRATION
A first attempt for an international research agenda

Paul VAN DER MOLEN, the Netherlands

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SUMMARY

The last decade the call for unconventional approaches to land administration has become manifest. Many global and national policy documents challenge land administration systems to adopt new strategies to cope with pro poor land management, sustainable development eand economic growth. Conventional ways of land administration, e.g. titling programmes, are considered as being too complicated, too accurate, too slowly, too expensive and too much in favour of middle and elite classes. This paper aims at analysing what land administration is, what the new challenges are, and which research is needed to meet the new requirements.

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An international research agenda.

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1. INTRODUCTION

'Land policies are of fundamental importance to sustainable growth, good governance, and the well-being of and the economic opportunities open to rural and urban dwellers-particularly poor people', according to the recent World Bank Research Report on Land Policies for Growth and Poverty Reduction (World Bank, 2003).

In the Handbook on Best Practices, Security of Tenure and Access to Land (UN/Habitat, 2003) and the guide Pro Poor Land Management (UN/Habitat, 2004) the UN/Habitat - in line with the World Bank report- encourages innovative approaches to land management and land administration to implement land policies.
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2. LAND ADMINISTRATION AS A TOOL

The definition of 'land administration' as 'the process of determining, recording and disseminating information about ownership, value and use of land, when implementing land management policies' has proven to be a guiding principle in policy documents, research programmes, and education and training (UN/ECE, 1996). Although other definitions are used (e.g. Dale & McLaughlin, 1999), and also the definition is challenged (e.g. Fourie, Groot & van der Molen, 2002), the definition still stands firmly especially when the concepts of 'ownership', 'value', and 'use' are interpreted in a broad sense.

The concept of '*ownership'* should -in our view- be understood as a relationship between people concerning land within any jurisdiction, so the mode in which rights to land are held, and therefore based on *statutory law, common law, and customary traditions*.

'*Value'* should be understood as all the values that could be assigned to land, depending on the purpose of the value, the use of the land, and the method of valuation.

'*Land use'* should be understood as both the use to which the land can be put, depending on the purpose and nature of the land, classification, methodology, and land cover according to defined classification systems (e.g. FAO Land Classification System, 2000)
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The concept of '*land'* should be understood as the surface of the earth, the materials beneath the surface, the air above the surface, and everything attached to the surface – i.e. it should be perceived as more than just the 'land' as such.

The definition reveals that land administration is a process, which brings application of process-modelling and related topics (e.g. workflow management, process re-design, and system-support), within the scope of land administration Finally, the definition makes very clear that the land administration activity is not an end in itself, but that it facilitates the implementation of land management policies. So, the way land administration should work depends on the requirements defined by the various instruments, which are at the disposal of governments in order to allow appropriate implementation of its land policy.

Unlike many other geographic information systems, which provide information about geographical objects and their attributes, land administration systems reflect in principle the social relationship between people concerning land, as they are recognised by a community or a state. Therefore such a system is in no way just a 'GIS'. Data recorded in a land administration system have a social and legal meaning, and are based on accepted social concepts. That concerns both to owners, rights and land objects. It is not relevant whether these concepts are laid down in the law or in unwritten customs. In both cases the way how rights to land, the right-holders and the land itself is understood by the individual people, determine the content and meaning of the land administration system. These rules, constituting the basic principles for the system and justifying its existence, form the institutional context for land administration. Without rules land administration is not possible, as it will be without a societal and legal meaning. By consequence it will be a meaningless activity, not worth to put any effort in.

Institutional aspects are therefore of paramount importance, The legal framework for land issues, and the mandates and tasks as they are allocated in the public administration to perform the land administration function, determine how the system should function. Other institutional measures also do, although they might be more specific and down to earth, like a requirement to the financial conditions that the government wants to apply on the land administration activity for example that the work should be executed under a cost recovery regime. Rules for investments in the system, the way it should operate, the way the government wants to keep control, all of these can form operational constraints.

Land administration serves various functions in a society. Documents like Agenda21, Habitat etc. relate the land issue very much to poverty reduction, sustainable housing, sustainable agriculture and the strengthening of the role of vulnerable groups in society, like women, farmers, and indigenous groups. Land administration systems are –as said earlier- not a purpose in them. They are part of such a broader land policy.

Land policy reflects the way governments want to deal with the land issue in sustainable development, or as the Guidelines say 'land policy consist of the whole complex of socio-economic and legal prescriptions that dictate how the land and the benefits from the land are to be allocated'. That of course depends on the culture, history and attitude of a people. It is worthwhile to draw up a picture of the support land administration systems give to the implementation of (the most important) land policy instruments, as there are -at least- (GTZ, 1998):

- *improvement of land tenure security*
- *regulation of the land markets*
- *implementation of urban and rural land use planning, development and maintenance*

-   *provision of a base for land taxation.*

Concerning the *improvement of land tenure security*, the legal framework of land administration systems (related to the registration or recording of rights and interest in land) is determining the nature of the security provided. Within the context of the definition of these rights 'in rem' (as an institutional prerequisite), deed-systems provide a different (in casu: less) security compared with title systems. The combination of a strong notary-system (e.g. *Latin Notary)* and a deed registration might however provide as much security as the combination of non-authentic (underhand) documents with a title registration (strong role of the registrar).

Concerning the regulations for the *land market,* land administration systems provide transfer procedures of a different nature. On one hand there are plain procedures of submission of a transfer document and a recording after a minimum of formalities (e.g. *simple deed registration*). On the other hand there are more complex procedures regarding investigations prior to the approval of the legal impact of the transfer (e.g*. issuing of a title certificate*). Some countries require approval by a chief surveyor, a chief planner or another authority. Advantage is that e.g. a building permit is granted together with the title, while in the first case the procedure for planning- and building permits starts just after the transfer. The process-time necessary for the transfer procedure (for example from the obligatory agreement to the official recording or registration that is often used as a benchmark) therefore might result in a different '*value*' for the applicant.

Concerning *urban and rural land use planning, development and control*, the support of land administration systems lies foremost in the phase of development and control of a given land use. This activity is to be seen as an intervention by the government in private rights to dispose. Without knowledge about who owns what and where (also in *customary areas*) land management will be hardly possible for the government. From the landowner's point of view, intervention by the government specifically limits his private right to dispose on the actual parcel, being the legal object of his private rights. The intervention takes an ultimate form in the execution of pre-emptive rights and expropriation. Regarding protection of third parties in good faith, pre-emptive rights and expropriation decisions should therefore be recorded in the land administration system.

Concerning the support of *land taxation,* the fact is that land tax is an outstanding example of local tax. Without knowledge about taxable persons, taxable objects and land values (all data to be provided by the land administration system), the generated revenue can not be high. Land taxation in many countries is based on land administration systems.

The *management of environmental resources* is of increasing importance. The measures a government can take, are in many cases executed by imposing restrictions on the use of land. A good example is soil sanitation, where governments can impose to owners of land a compulsory soil cleaning, and can give such measures the status of real right, which means that these orders have legal power against third parties (e.g. new owners). Therefore these public encumbrances are eligible for registration.

3. INTERNATIONAL APPROACHES TO THE ISSUE

In the Handbook on Best Practices, Security of Tenure and Access to Land (UN/Habitat, 2003) and the guide Pro Poor Land Management (UN/Habitat, 2004) the UN/Habitat encourages innovative approaches to land management and land administration. This is necessary in the process of recognising 'that people living in slums have a right to be in the city, and that this recognition will begin to make slum dwellers legitimate citizens which will start to legalize their tenure'. However, the traditional approaches to land management and land administration are inefficient and ineffective, because of –amongst others- rigid and costly regulatory frameworks and poor land recording systems and centralized information systems. To meet the need of the poor, innovative approaches are necessary, like the development of additional or alternative sustainable forms of tenure, decentralised and efficient systems of land administration including appropriate cadastral and land registration systems. Arrangements for simplified procedures that promote transparent, accessible, user friendly, and accountable land administration should be included. In stead of thinking in terms of titling, freehold, and leasehold, one could consider a variety of options regarding land rights, which fit into a specific context and in accordance with needs. From the system perspective the UN/Habitat considers as necessary innovative approaches like local land registers, effective central-local information and function linkages, more inclusive registers, parallel land registration, digital access, better public awareness, privatised service and simplified recording of spatial representation.

The FAO states in its approach to land tenure that 'efficient procedures allow transactions to be completed quickly, inexpensively, and transparently. However, in many parts of the world, formal land administration procedures are time consuming, bureaucratically, cumbersome, and expensive, and are frequently non-transparent, inaccessible for too much of the rural population, and are handled in languages and forms that people do not understand. In such cases, high transaction costs may result in transfers and other dealings taking place off the record or informally'. (FAO, 2002).

The European Union, in its decision on 'EU Guidelines to support and policy design and reform processes in developing countries' (EU, 2004), considers land policy as important because 'the distribution of property rights between people has a tremendous impact on both equity and productivity'. In the past, according to the Guidelines, 'donor support has often been limited to promoting titling and land information systems, non-contentious activities believed to be technical, neutral and universal, which neutrality often led to choices unsuited to local realities, thus excluding the poor'. The EU considers as central issues for the design of land policy and land reforms amongst others that securing land rights largely is a matter of 'having effective institutions and enforcement rules for the management of land rights and not merely a question of the formal legal nature of the rights themselves', which make 'new forms of statutory rights necessary, which combine both individual and family rights', and regarding land administration systems the EU encourages a broad view of 'cadastral systems and titling methods, in order to establish reliable and appropriate records of village, family or individual land rights, and the registration of broad sets of rights, at low cost. Innovative systems are to be designed and tested, which offer new solutions'.

In the Policy Research Report 'Land Policies for Growth and Poverty Reduction' (The World Bank, 2003) the World Bank aims at the renewal of its earlier approach to land issues, as pronounced in the 1975 Land Reform Policy Paper.

Based on a wide array of research of the last 30 years, the Bank concludes first that the 'almost exclusive focus on formal title was inappropriate, and that much greater attention to the legality and legitimacy of existing institutional arrangements will be required', second that the uncritical emphasis on land sales should be replaced by more attention for the rental markets, third that in order to fully utilize the application of land redistribution mechanisms it is necessary to 'carefully assess the requirements and scope of the intervention compared with others'', and that there should be more links between land and the broader economic development, that could help to integrate land issues with a long-term strategy that has broad support at country level'. Regarding property rights to land the Bank recognises that compared with traditional formal titling, 'less formal measures can often significantly enhance tenure security at much lower costs', giving lots of examples where innovative practices allow for gradual upgrading over time, and make it possible not only to improve security of tenure, but also to strengthen local government institutions. Institutions dealing with land administration 'need to be transparent, accessible and cost effective', with low cost registration and demarcation mechanisms. These institutions should have clear mandates, and a structure that allows them to function efficiently, and free from political pressure. Developing a strategy that would 'provide a comprehensive spatial data infrastructure at low cost which can be the frame to manage registries of different categories'. To ensure sustainability of these systems 'if land owners are expected to register transactions and to use the registry , their costs in time and money for doing so should be minimized'. Regarding land transactions, the Bank is critical about land administration systems that bring about high transaction costs (in whatever form), and 'constitute significant impediments to the market activity and reduce the ability for the less-wealthy to participate'.

The efficiency of land administration systems is further explored in the report 'Doing Business' of the World Bank (The World Bank 2005). Land administration systems are rated in terms of the number of procedures necessary to register a property right, the costs as a percentage of the value of the property, and the time it takes for completion of all the necessary procedures. The results of the investigation reveals that the number of procedural steps to be taken is 1 in Norway (fewest) and 21 in Nigeria (most), the costs 0% in Saudi Arabia (least) and 34% in Senegal (most), and the time needed is 1 day in Norway (least) and 956 days in Croatia (most). The report advises at least 4 steps to improve land registration, such as 'simplification and combination of procedures, link and unify agencies involved, provide easier access to registers, and don not regard technologies as a panacea'. Reform is necessary, concludes the Bank, because with bureaucratic property registration, many entrepreneurs (the target group of the report) 'choose to keep their assets informal, and that investments in expensive titling-programs is ill-advised in such countries'.

4. ATTEMPT FOR AN INTERNATIONAL RESEARCH AGENDA

The objectives of an international research agenda become manifest, by having a closer look at the UN/ECE definition of land administration. There are three reasons why this agenda should be an international one.

- the issues are too broad to be investigated by one single university
- application depends on local circumstances

Based on the definition the following elements occur: process, determination, recording, dissemination, information, ownership, value, use, land, implementation, land management, policies.

Land administration systems represent both static and dynamic components. Ownership, value and use of land as it exists and is recorded, can remain in the files for many years. I would call this the static component of land administration. However, ownership, value and use of land might change over time, some by autonomous developments, and some by action (van der Molen, 2002). The introduction of new forms of land tenure, changing land use, land markets, land use planning are amongst the actions that might lead to changing ownership, value and use of newly defined land objects. I would call this the dynamic component.

The reason why land administration systems have a dynamic component, is that they are not a purpose in themselves, but have to serve the implementation of land management policies, as there are the provision of land tenure security, land use planning, land taxation, land market, land reform, management of natural resources.

I would call this the purposeful environment of land administration.

Although last decades many papers and articles on land administration were published (see e.g. www.oicrf.org), the new challenges for land administration as summarized in chapter 3 – in my view- are not easily answered. How to create systems that for example can cope with new forms of tenure, new spatial objects, pro-poor approaches, and local needs (post conflict countries).

Let's have a closer look to the different aspects of land administration.

The most important part of the definition in my view is 'when implementing land management policies'. My interpretation is that land administration is not an end in itself, but has to serve societal needs. How land administration should work and what it should do finds here its justification; the societal needs determine how accurate, up to date, complex and expensive the system should be, what it should accommodate and what not, how it might evolve, be scaled up and upgraded. Not so much is known about these relationships; attempts are made in (Feder, 1987), (Williamson, 1997), (Munro-Faure, 1999), (de Soto, 2000), (Wessely, 2002), (Van der Molen, 2003a). Encouraging is (McKinsey, 2002), where is calculated that removing the obstacles in the real estate market in India will result in 1.3% extra economic growth annually. Research questions are

- what is in a country the role of land in political objectives of poverty eradication, sustainable agriculture, sustainable housing, strengthening the role of farmers, vulnerable groups.
- what is in a country the appropriate land policy to meet the political objectives in terms of access to land and land related opportunities.
- What are in a country the instruments to manage land within the policy context in the sense of establishing land tenure security, urban and rural land use planning and development, land taxation, land reform, management of natural resources (GTZ, 1998), (micro-)credit (also the impact of customary tenure on urban development, see Mends 2005)
- What is the role of land within these instruments, what kind of interventions of the government in property rights are relevant and effective?
- What is the appropriate structure and mandate of the supporting public administration (decentralisation, local custodianship)

Another aspect is that land administration data are not the only data that are needed to pursue land management; many other datasets are needed, like census data, geology, soil, geomorphology, infrastructure, topography. So land administration data should be facilitate sharing and integration with other datasets, so should operate within a spatial data infrastructure, which requires research on

- Interoperability from technical and information point of view (Groot et al, 2000), (Williamson et al, 2004)
- Core cadastral domain, to identify ways to cooperate between land management actors (ESRI, 2004), (Lemmen et al, 2004)

My interpretation of 'land administration is a process' is that land administration is a continuous activity that takes place in an organisational environment. The demands on the 'processes' are that they are transparent, reliable, predictable, workable, simple, low cost, free of opportunities for corruption (see above and also UN/ECE 1995. Mwanza 2004) , with appropriate use of information technology (FIG 2005), and well managed within a strategic context (van der Molen 2003b). Research questions are:

- how to design processes that are simple, cheap and transparent (process design, process simulation and benchmarking techniques) (Radwan et al, 2001)
- how to manage these processes in such a way that low transaction costs are guaranteed (planning and control cycle, workflow management, management criteria)
- how to define appropriate technological support (information-, software-, and hardware architectures)
- how to develop strategies that optimise the functions of land administration in a society.

My interpretation of 'determining' concerns adjudication processes and cadastral boundary surveying, thus data-acquisition for both legal and technical purposes. Within level of justification on investments derived from societal needs, research questions are

- What level of evidence is needed to authoritatively ascertain existing rights in a particular parcel (Lawrance, 1985). Innovative example is (McLaughlin, et al, 1994)
- What is appropriate participation and conflict resolution mechanisms (also for illiterates)
- What technology is appropriate to map and maintain geometrical cadastral information within the strategic objectives (FIG, 2005)

My interpretation of 'recording' is that there is a need for efficient and effective recording and archiving of cadastral data in such a way that quick data-access is possible. Research questions are

- what is quick, simple and cheap database-technology
- how can quick data-access be realised
- what are adequate data- and information models that constitute sustainable information management.

'Dissemination' comprises in my view both distribution-policy and physical distribution channels. A modern approach to distribution of information is that is not only meets certain agreed specifications, but also service levels, multi-distribution- channels, value for money. Many land administration organisations refer only to the first requirement (Magis, 2002). Research questions are

- what constitute user satisfaction
- what are the mechanisms to formulate context-relevant specifications of products and services, service-levels, distribution channels, and priding policies
- how to safeguard agreed levels through quality management
- how to deal with the opportunities of internet (web-access, cooperation with other data-suppliers)

'Information' is meaningful data. Here we touch in my view the institutions that attach meaning to cadastral data, both in the statutory and the non-statutory environment. Referring to the basic relationship of men to land through a right, legal meaning is attached to who can be right-holder, which rights can be executed, and what objects might be subject to the exercise of rights. Another element is which security exists, and should be provided to right-holders. A vast amount of literature exists that explores land tenure and spatial objects. Research questions are
- how meaningful should cadastral data be to meet the societal needs (in terms of recognition and legal security)
- which institutions should be in place to provide meaningfulness (law, local arrangements)

'Ownership' is in my view crucial aspect. Although the rigidity of the 'Western' approach is often challenged (e.g. Bruce & Migot-Adholla, 1993) the four seminars on World Bank Land Policy recently held in Budapest, Kampala, Pachuca and Phnom Penh exhibit a major breakthrough with respect to the recognition of what has been referred to as *indigenous systems of land tenure*, i.e. customary tenure and other forms of non-formal tenure. It is stated that 'it now is widely recognised that the universal provision of secure land rights within a country does not require uniformity of the legal arrangements, and that there is some form of consensus on the desirability of having legal recognition for customary forms of tenure and land right for the indigenous people'. 'There is a need to devote greater attention to the sustainable management and evolution of customary tenure systems, where communities should be allowed to choose between different types of tenure' was said.

Some countries develop land legislation, which endeavours to integrate customary tenure within the formal system. Bosworth (2002) reports on Uganda, where the Land Act enacted in 1998 provides for methods to adjudicate on customary rights and the issue of certificates of customary ownership and occupation certificates for tenants on *mailo* land, as well as the establishment of a Land Fund to assist in the market-based transfer of rights between tenants and landowners. These certificates will be mortgageable. Consequently the Act recognizes group rights to land by means of the registration of communal land associations with elected management committees. Quadros (2002) reports on Mozambique, where the new Land Act 1998 recognises customary rights in the form of co-titling and the need to consult with the local communities as part of the authorization process for new investments. In Namibia a new Land Law is pending that will address the broad issues of communal land reform by means of the creation of regional land boards (Pohamba, 2002). Van den Berg (2000) states that under a new Act in South Africa communal titles can be granted to Communal Property Associations. Also in other parts of the world these developments occur: for example in Bolivia, where the INRA Act (1996) (Ley Instituto Nacional Reforma Agraria) provides for the recognition of *Tierras*

Comunitarias de Origen (TCOs), i.e. land belonging to indigenous people (Zoomers 2000).

The recognition of customary rights also devotes attention to rights of sheep and cattle farmers. In many countries there are serious conflicts between traditional nomadic sheep or cattle farmers and arable farmers about grazing and farming lands (such as Kenya, Tanzania, Rwanda). Tanzania's new village Land Act provides for the sharing of pastoral and agricultural land by sheep and cattle farmers and arable farmers on the basis of adjudication and mutual agreements (Mutakyamilwa, 2002).

In analogy with pastoral rights, the problem of overlapping rights and derived rights (or *'secondary rights'*) like access to water, fuel wood, fruits, burial place, are yet to be resolved in many countries. This relates very much to the issue of access to land and to land related opportunities for women and vulnerable groups.

Research questions related to 'ownership' are in my view

- What is the type of land tenure that meets societal needs in terms of breadth and extent of rights and level of legal security (legal also in the sense of normative social behaviour).
- What are appropriate mechanisms to change land tenure (evolution, planned)
- What are appropriate mechanisms for solving conflicts

'Value' is a matter of attaching monetary value to land. In many countries land does not have a monetary value, because the concept of land is not that of a commodity. With the break down of customary tenure in some countries because of growing population, scarcity of land resources, need for credit, urbanisation this concept is challenged. Also in countries with developing land markets monetary value is added to land one way or another (benchmarking price in China, Russia). At the same time, value is a relative notion, it depends what the purpose is; from that point of view land has many 'values'. Research questions in my view are

- what is the concept of value that meets societal needs
- what are simple, cheap, and transparent valuation mechanisms (individual assessment, mass valuation) (IVCS, 2001) (UN/ECE, 2001)

'Use' might be interpreted in my view in two ways, namely the land cover and the land use given by land use planning (zoning). Land use is often an essential part of cadastral systems, especially in countries where a tradition of central planning exists or existed (Central and Eastern Europe, China, Vietnam etc.). Research questions in my view are

- what is the appropriate mechanism to classify land cover (FAO, 2000)
- what are relevant planning methods to manage land use (including ways of government interventions)

'Land' regards the object of land administration. This brings along the issue of the nature of the spatial unit, which forms the basis for any form of land administration... Objects on which customary rights are exercised are not always accurately defined (Neate, 1999). Within this context Österberg (2002) advocates a flexible and non-traditional approach to the spatial component (both conceptually and technologically). Fourie (2002a, 2002b) notes that non-cadastral information should be integrated in spatial information systems since 'the high accuracies and expensive professional expertise associated with the cadastre has meant that there is too little cadastral coverage in Africa'. How to solve the problem of overlapping rights in relation to accuracy? Geodesy and cadastral

survey technology allows for accurate, less accurate and even bad accurate approaches: accuracy is considered to be just a quality label. High accuracy as such is definitely not a condition or prerequisite. Identification from less accurate aerial photographs or satellite images is a well-known approach and understood by the citizens. It is also valid for tapes (e.g. Namibia) or plane-tables (e.g. Nepal) in cities. Research questions in my view are

- what is the appropriate spatial unit in the land administration system
- what are the participation of right holders on the definition of spatial units
- what are the technological means to identify various forms of spatial units as they are required by societal needs
- what are evolutionary methods to define spatial units.

Although not explicitly mentioned in the definition of 'land administration' the higher context of this activity is 'good governance' and the 'rule of law' as generic principles for all government policies and operations. Trust in the government or in local institutions (chiefs) is a cornerstone in the acceptance of land administration, and the rule of law should be reflected in the law and its enforcement.

5 CONCLUSIONS

The definition of 'land administration' explicitly comprises relevant field. Although the international literature addresses many of the issues mentioned in the definition, further effort is necessary to get a better view on how to meet the societal needs. This is urgent, as the trend in many important documents (Chapter 1 and 2) is that the way land administration is pursued, is challenged. At the same time, the same documents make clear that some form of land administration is directly related to poverty eradication and economic growth. Conventional approaches are proven not to be successful in any case and fail to deliver adequate support to societal development. Unconventional approaches are needed; there is a call for innovations. As land administration is a multi disciplinary activity, the joint effort of social scientists, lawyers, land surveyors, process- and logistic professionals, business administrators, and IT-experts is required. This is the challenge for now and for the future.

Note: this material also has been used for an UN/FIG expert group meeting in Bangkok, December 2005.

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BIOGRAPHICAL NOTES

Paul van der Molen (55) has a degree in geodesy from Delft University of Technology (NL). He is currently a director of the Netherlands Cadastre, Land Registry and Mapping Agency, responsible for Kadaster International. He is a professor at the International Institute for Geo-information Science and Earth Observation ITC in Enschede (NL). He acts as a chair of FIG Commission 7 and as a director of the FIG International Bureau of Land Records and Cadastre OICRF.

CONTACTS

Cadastre, Land Registry and Mapping Agency
Kadaster International
PO Box 9046
7300 GH APELDOORN
E-mail: paul.vandermolen@kadaster.nl
tel +31-55-5285695
fax +31-55-3557362
web: www.kadaster.nl

International Institute for Geoinformation Science and Earth Observation
PO Box 6
7500 AA Enschede
E-mail: molen@itc.nl
tel. +31-53-4874444
fax +31-53-4874400
web: www.itc.nl