O. Univ. Professor Dr.-Ing. Holger Magel FIG President 2003 - 2006 Director of the Institute of Geodesy, GIS and Land Management Technische Universität München

Land Policy and Land Management in Germany

Public lecture in Melbourne, 6 February, 2003

I. The Land Issue – politically very sensitive but for the State of decisive importance for the future

Let me begin with three anecdotes from my native Munich, each of which will throw a different light on the subject of 'land'.

- After the solemn Christmas service in my Munich parish church of St Clara, the congregation were invited to the sales stall of the "One World" youth group. Homemade cakes were offered to the members of the congregation. The proceeds went to the project 'Land for Indians in Ecuador'.
- 2. The Nature Protection Association in Bavaria celebrated in November 2002 its victory over the German Federal Government as a pre-Christmas present. The Association had been successful in its proceedings against the construction of a Federal highway. This highway would have gone through ecologically highly sensitive areas. In order to strengthen its procedural position as plaintiff, the Nature Protection Association had over the years systematically purchased land along the probable route and thus made itself the spokesman of the affected landowners. It had even consciously speculated on the last resort of the planners, namely expropriation.

3. In the context of a task which they were given in a Seminar as part of the Master's Course 2002/2003 on Land Management and Land Tenure at the Technical University of Munich, the students were asked to describe the land policy and land tenure systems which prevailed in their respective countries. Whereas representatives e.g. from Tanzania, Kenya or Ghana had a lot to say about customary rights and the law taken over from the colonial power, Great Britain, a Libyan student complained that he had only now become conscious of how little had been documented and discussed about this subject in his native country.

One could almost have had the same impression as a visitor to the World Summit on Sustainable Development (WSSD) in Johannesburg 2002, if one had paid attention only to the official meetings and declarations, without visiting the many side events presented by international donors and NGOs, such as for example those of the USAID, of the IFAD, or of the Popular Coalition to Eradicate Hunger and Poverty etc. Here one could hear from the mouth of the Vice-President of the World Bank **Ian Johnson** or from **Hernando de Soto**

what the heads of State also knew but for political reasons did not say. Poverty and hunger reduction or a more efficient and above all more sustainable use of land are not achievable without a just resolution of the "land issue" and particularly of access to land and resources in the sense of the Bathurst

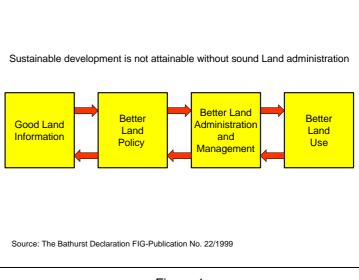


Figure 1

Declaration and of the UN-FIG Conference at Melbourne in 1999! (FIG, 2000). (See Figure 1)

It is gratifying that this perception has been adopted by the World Bank – almost certainly because of the persuasive work of **Ian Williamson** and various other FIG personalities such as its past President **Peter Dale**. The World Bank has in the last year organised four regional workshops in the course of preparing its land policy reports (DEININGER/BRINK, 2002). It thereby opened up in a remarkable manner and further developed intellectually its principles which had hitherto been very economic and based on the free play of market forces. To the land issue, i.e. equitable distribution, use and access to land, as far as possible on a private law

basis, but entirely possible on the basis of customary rights – belong naturally first of all the three pillars of PETER DALE (2000, 2002): 1st pillar: land registration and cadastre, 2nd pillar: land valuation and

cadastre, 2nd pillar: land valuation and 3rd pillar: financial services (see Figure 2).

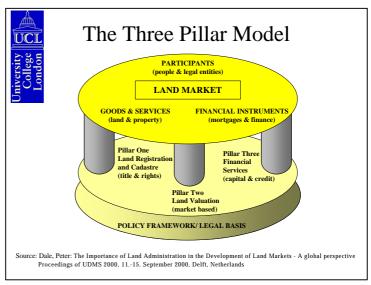


Figure 2

There is however more which belongs to the land issue, and that is something very fundamental, namely urban and rural development.

It is for example of little use – and this was clearly said by the central and eastern European representatives to World Bank and USAID officials just at the Budapest workshop – to reprivatise property which had been socialised in the Soviet era and to digitalise and document it in registers and to leave the millions of landowners to their own devices with their divided

parcels of land incompletely connected to roads and public services. No increased value and no land market comes into existence in this way. The State must therefore be active here and at least provide the minimal structural framework conditions for the endogenous development and improvement which it both desires and which it is seeking to bring about. The catchwords here are regional planning and development, rural development, village renewal, nature protection and land consolidation on the one hand and urban development, promotion of urban construction, urban readjustment etc. on the other.

The ten States whose accession was recently approved by the EU are in the meantime well aware of the central importance which an equitable land policy had and has as a stabilising factor for the new development of their social and economic systems; of how fundamental efficient land administration and land management is, and of how decisive an overall structural policy for towns and villages is for the balance between town and country. The EU did not only insist on a verbal acknowledgment of this, but set the drawing up in practice of a development programme and plans over several years as a prerequisite for accession and for the assistance which they seek.

These countries were able in doing this to take as an example a large-scale experiment, hitherto without precedent, which has recently taken place in Central Europe under great time pressure, in the so-called five new German *Länder*. Land registers and cadastres once again exist there, there are also exemplary *Länder* constitutions, which have even attracted attention here at the University of Melbourne (see RAFF, 1999). Despite a continuing lack of jobs and the resulting drift away of young people, there is once again a flourishing landscape, by which I mean splendidly restored towns or renewed villages; there is an economically functioning agriculture, which even poses a threat for the small scale agriculture in western and southern Germany, and in the meantime there is a countryside exemplarily connected by new railway

lines and roads. All this happened with the help of massive financial support from the EU and the Federal German Government on the basis of programmes, plans and measures. To these belonged and belong in the first instance land readjustment measures in town and country to implement public and private interests and to resolve conflicts of interests. Town and country development were also involved, as well as land management measures to improve the residential, working and general infrastructure, the environmental conditions, and the townscapes and landscapes. And everywhere land surveyors were and are to a greater or lesser extent involved – whether engaged in the survey offices which in the meantime have been established again everywhere or in the authorities for Land Consolidation or Land Development, or in the universities or as independent planners and engineers. Our surveyor colleagues in the new Federal *Länder* are "'freeing" themselves more and more from "colonisation pressures" and influence from the old Federal *Länder*. They are trying out new surveying and cadastre techniques of their own in order to meet time and financial pressures, often to the head shaking and protest of their West German professional colleagues.

It is no secret that the European cadastre systems and particularly the German system do not suffer from the accusation of being too simple and too cheap. The experts, and I do not count myself among them, must resolve this amongst themselves. It is undoubtedly true that for example in development cooperation there are some things which are exaggerated or simply misunderstood. In my view, every country must set up its own registration system in the light of its state of development and structure as well as its current and probable future needs and possibilities. Such a system must be capable of development and above all be compatible with new technological advances.

No country should seek to impose its arrangements on another. It is however undoubtedly right, at the commencement of possible cooperation, to set out clearly how one thinks and

operates at home and the underlying philosophy and concepts. So what is the picture here in Germany, the home country of the current FIG leadership?

II. Germany has a complex system and a rich case law on land policy and instruments

In what now follows I should like to set out as concisely and as simply as possible the most important definitions and central principles related to German land policy from a legal and specialist planning point of view.

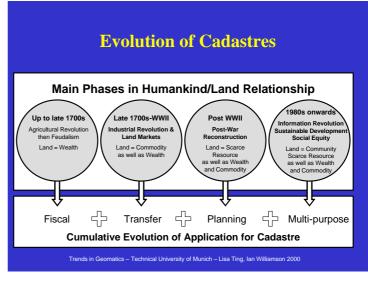
- 1. First of all as to the meaning of **land**. It has three fundamental dimensions, particularly for urban construction and land use planning (DAVY, 1998).
 - "Land" as legally regulated space subject to legal rights and thus as <u>property</u> (Latin "dominium"). It is a matter of territorial sovereignty rights as well as of private (or communal) rights of ownership of land.
 - "Land" as the quintessence of space as a tradable commodity and thus as having an <u>economic value</u>.
 - "Land" as an environmental and cultural medium and thus as the physical and socio-cultural <u>foundation for the life</u> of mankind, animals and plants (in Germany land is sometimes also spoken of as the spiritual location and place of the collective memory).

PETER DALE (2002) has even undertaken a classification into five separate aspects and regrets that we do not deal with land "as a whole, as a complete entity" (loc cit). Land is

indeed today, in a Germany which is becoming ever more and more densely populated, regarded as a scarce and not expandable resource. It is valued particularly by the public at large as an irreplaceable natural foundation of life for **all** human kind. Nevertheless, we are still negligent in the way we treat this resource in that every day over 130 hectares of open countryside are "consumed", i.e. built over.

This is also shown in the graphic by TING and WILLIAMSON (1998) and I. WILLIAMSON (2000), in which they speak of "land as a **community** scarce resource" (see Figure 3).

The German Federal Constitutional Court pointed out in 1967 that land





is not expandable. "This fact makes it impossible to leave its use to be determined by the obscure interplay of market forces and the whim of the individual. An equitable legal and social system calls instead for the public interest to play a much stronger role in the case of land than in the case of other property assets. That is why land cannot be treated as moveable goods in legal relationships" (loc cit).

In the context of the sustainability strategies in the implementation of the RIO goals and in preparation for Johannesburg, the aim of careful management of land acquired an entirely new significance in Germany. A debate has started over such matters as the conversion of waste land or land-saving denser building (smaller building plots, common use of land, etc.), ecological "area tax" to compensate for the use of land, covering up of land etc. In the meantime, almost all the relevant laws and programmes which are concerned with the development of land-related areas incorporate the requirement that operations affecting land should be sustainable and sparing in their use of land. (The best example is e.g. the Federal Regional Planning Act or the Federal Building Code.)

The value of land as an economic commodity, e.g. for particular uses such as residential purposes, industry, commerce, infrastructure, agriculture, etc., is usually clearly defined and assessable in land transactions. In this connection there are **clear laws and rules for valuation methods**. Because of the strict nature protection legislation concerning the duty to compensate for the utilisation of land, a "shadow" market has developed. It happens not infrequently that the consumption of land as a result of public road construction measures must be "paid" for many times over by ecological compensatory areas which are made available in the proportion of 1 to 5 and even up to 1 to 10. In the case of new residential areas there is an even more complex valuation and compensatory system for which geographic information systems are already being used.

2. Land policy is regarded in accordance with an Advisory Opinion of the Federal Constitutional Court in 1954 as a part of spatial planning. In accordance with a definition by Professor SEELE (1979), at one time Chairperson of the FIG Commission 3 Land Information Systems, it comprises the totality of the activities of public authorities in relation to land.

Land policy is understood as conscious action to bring about – in the sense of spatial planning principles and aims – an optimal use of land as well as – in the sense of a wide distribution of private landownership (note by MAGEL: still politically desirable today) – of a socially just distribution of landownership and of income from land.

In other words: land policy concerns itself with the question, who uses the land for which purposes (allocation aspect) and who should profit from the use of land (distributive aspect).

It would seem as though a particular Ministry, namely the one responsible for spatial planning, should be responsible for or at least be the lead Ministry for land policy. The position nevertheless is that in Germany there is no one Ministry which is officially responsible (see also DALE, 2002). It cannot indeed be otherwise, as land policy affects so many different areas of ministerial responsibility.

There is not even a national land policy board, as has been proposed by the GTZ itself in the context of advisory work in development cooperation (GTZ, 1998).

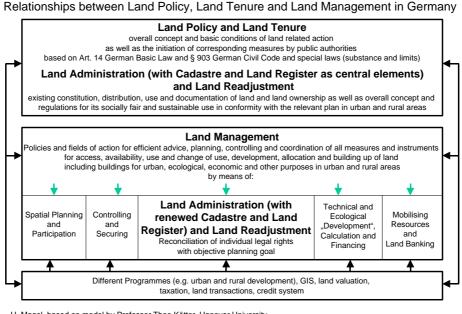
3. Land law in the same Advisory Opinion of the German Federal Constitutional Court (1954) is "defined as the sum of the rules which regulate those matters which, arising from the interests of society, require regulation in relation to land transactions, parcels of land, property relations and kinds of use".

It will be immediately clear from this that building law as well as town or country readjustment belong to land law.

4. The regulation or regulating referred to by the Court consists of the creation and maintenance of what is called in Germany *Bodenordnung*, which marks out the legal framework for rights of use and disposition over land.

Experts in Germany accordingly know and apply a two fold concept of Bodenordnung.

On the one hand this refers to the more **static concept** of *Bodenordnung* in the sense of land tenure. It comprises the contemporary concept of ownership of land, including its use and taxation as well as the overall concept of development aims for the future (new) land administration (see Figure 4).



H. Magel, based on model by Professor Theo Kötter, Hanover University at the 3rd Munich Congress of Land Readjustment and Land Development 2001

Figure 4

On the other hand the experts speak of the **dynamic components** of *Bodenordnung*. In this sense of land readjustment it comprises all measures which serve the reconciliation of the (subjective) ownership, tenure and use of land relationships with the (objective) aims of spatial planning and the resolution of conflicts between public and private interests (SEELE, 1979). I will accordingly speak of land tenure and land readjustment as appropriate.

Land readjustment procedures which are well known and also practised in many other countries of the world are urban land readjustment and rural land readjustment or land consolidation. In the latter case many infrastructure, ecological and technical engineering planning and other measures will also be relevant. These we call land development measures (MAGEL, 2000).

Both types of land readjustment procedures can be applied in one and the same place. In the context of FIG work, Commissions 7, 8 and 9 in particular are affected by these procedures, and naturally Commissions 3 and 5 as far as the technology is concerned.

5. We must now turn at last to the frequently mentioned concept on which everything turns (including also access to land), namely land **ownership**.

The concept of ownership in Germany goes back in the first instance to the strongly individualist values of the Roman law concept of ownership. In this respect it differs e.g. from English law (BOER/HANNAM, 1991) as well as from the earlier Germanic law of shared property (HOISL, 2002). In contrast to ancient Rome however, German property law has known at the latest since the Weimar Constitution of 1919 clear restrictions and obligations.

Article 14 of the Basic Law accordingly reads:

(1) "Property and the right of inheritance shall be guaranteed. Their content and limits shall be defined by the laws."

Rules of public law such as e.g. planning in accordance with the Federal Building Code or Water Management Acts or provisions of tax laws and many others define the content and above all the limits of property rights.

(2) "Property entails obligations. Its use shall also serve the public good".

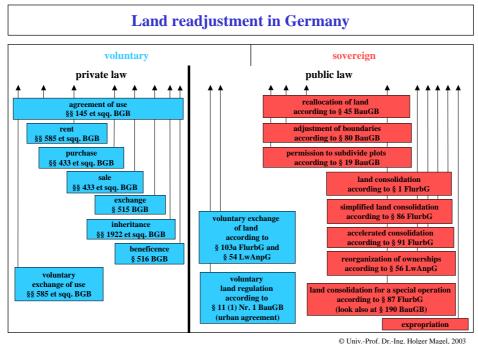
The substance of this second paragraph of Article 14 of the Basic Law is concerned with the frequently invoked **social ties on property** particularly on property in land. In the context of the elevation of environmental protection to the constitutional level by its inclusion in the Basic Law (see RAFF, 1999) and of Germany's RIO obligations, this paragraph has acquired a predominant and still increasing importance for the unrestricted or restricted exercise of rights of property in land which may or may not be subject to compensation. Where e.g. laws on nature, water or land protection on behalf of and in the public interest contain provisions which limit the free exercise of property rights, it must be examined on a case by case basis whether or not such limitation – subject to compensation or otherwise – falls under the social ties of paragraph 2. If it does not, it is possible that the matter already falls under paragraph 3 of Article 14 of the Basic Law. According to this provision expropriation is permissible, but only for the public good. It may only take place by or pursuant to a law that at the same times determines the nature and extent of compensation.

Geodetic experts in land readjustment are frequently to be found here in the forefront. Over and beyond the technical survey and valuation of the parcel of land in question, they are involved in the attempt to avoid such expropriations. This can take place by the exchange of areas of land belonging to the parties in dispute in the context of narrow or broad land readjustment proceedings. Particularly the embedding and resolution of such property as well as use and access conflicts between the public good and private interests in land readjustment proceedings gives the surveyors responsible for these matters a high socio-political responsibility and position: it is ultimately a matter of a fiduciary safeguarding of private property and private use and a just representation of the public interest. The latter tends unmistakably - and this is reflected also in court decisions – more and more in the direction of sustainable protection of our limited resource and basis of life, namely land, or in other words our cultivated and natural landscapes and thus more in the direction of social ties. European and national agricultural and environmental policy has already reacted to this: compensation for limitations on property rights is being provided more and more in the relevant laws and promotion schemes. Good examples of this are the agricultural and environmental programmes as well as e.g. the so-called contractual nature protection under the Bavarian Nature Protection Act. The farmers, despite a certain amount of complaining, have by and large come to live with this arrangement. They need after all the good will of the general public!

Reflecting the multiplicity of its roots in Roman and Germanic law and even in the Napoleonic Code Civil, the German Civil Code (the Bürgerliches Gesetzbuch or BGB) also contains a central paragraph on ownership (§ 903), well known here in Melbourne also, the substance of which naturally goes in the same direction as Article 14 of the Basic Law, which we have just considered.

The German Civil Code knows moreover many other rules concerning both property in general (e.g. as the result of succession, gift, sharing or purchase) as well as more specifically land law and land administration (e.g. voluntary use agreements, lease, exchange). (See Figure 5)

6. Ownership of land is recorded in Germany in **two** official records: in the **Land Register**, which is maintained by the civil courts, and in the **Cadastre**, which is the responsibility of the geodesists attached to the Land Survey Offices. The so-called real estate cadastre



Chair of land readjustment and land development, TU München

Fio	lure	5

(*Liegenschafts*-Kataster or LK) is the official register of parcels of land and buildings and thus a fundamental basis for the Land Register, in which the owners of the plots and buildings including rights and obligations *in rem* are set out. Central elements of land administration in Germany are thus always the Land Cadastre and the Land Register. In addition valuations and theories and models for the real estate market (so-called land economy) are among the other important geodetic activities in the context of land administration.

Geodesists have always had a particular and manifold relationship to property in land. They establish it, change it, survey it and above all they document it in special records and maps, which in Germany are known as a "Real Estate Register" ("*Liegenschaftsbuch*") and "Cadastral Map" ("*Flurkarte*"). In the strict sense these records belong in Germany to the static concept of land order or, as is shown in the Figure 4 and 6, to the generic term land administration and *Bodenordnung*. There follows the dynamic aspect of *Bodenordnung* i.e. land readjustment which we have just mentioned, in the context of which, and on the basis of

urban construction, agriculture structural, infrastructural, ecological and many other kinds of planning, ownership of land is changed. It is here that so-called land management is practised (see Figure 4). Both the starting point and result of all these activities are in Germany always the Cadastre and the Land Register.

Surveying in Germany is a *Länder* and not a Federal responsibility. There are inevitably differences between one *Land* and another, but on the whole a general framework regulation is sought in the framework of the Working Committee of the Surveying Authorities. At the present time the German *Länder* are in the process of automating the two parts of the real estate cadastre, the register and the maps. The next step is an amalgamation to create just one information system, namely the ALKIS (BILL/SEUß/SCHILCHER, 2002). The name ALKIS, <u>Amtliches Liegenschaftskataster InformationsSystem</u> (Authoritative Real Estate Cadastre Information System), indicates that the cadastre in Germany has developed from its previous role as evidence of ownership and parcels of land to a central geo-basis data and geo-information system. All other official data and information systems should in future be based on this. The use of modern GIS technology has made a decisive contribution here.

The role of geodesists in the field of cadastre and land administration has also developed beyond its original purely fiscal and legal functions to a service role in partnership with the State, commerce and citizens. The further possibilities offered by the survey offices in the field of the topographical-cartographical information systems as part of ATKIS naturally contribute to this.

7. To conclude the second part, **further important elements of German land policy** and of German land and property law should be mentioned once more, not definitively, but simply as headings. Such elements are, in addition to the special laws (in the field of nature protection, water law etc.) centrally the national Building Code (and the related *Länder* regulations) with

inter alia its possibilities of comprehensive land use planning, of the so-called land mobilisation and development, of the right of pre-emption and its possibilities of limiting land transactions or other property rights etc. Of central importance are the **special laws for agriculture** (the Agrarian Land Act, WINKLER, 1991), with the Land Transactions Act, Agrarian Land Inheritance Act and Agrarian Leases Act. Above all there is also taxation law with its direct influence on the actions of land owners (land tax, land acquisition tax, inheritance tax etc.).

III. Land Policy and Land Management – a Challenge for Geodesists

Land management is used here as the collective term for advising, planning, constructing and re-adjustment (see Figure 6 and FIG, 1991). It thus goes far beyond land administration and land development.

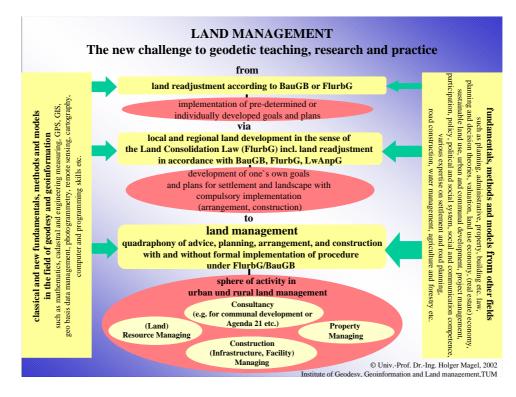


Figure 6

Important fields of action of land management for implementing State development aims for town and country in the light of land policy and land law area are:

- Regional and local development processes including strategic concepts for sustainability
- Special urban and village renewal programmes
- Land consolidation and landscape engineering
- Land development measures for promoting rural locations or for implementing public infrastructure measures etc.

Both specifically "geodetic" as well as much groundwork, methods and models from other disciplines are required here (MAGEL, 2003).

"Geomatics und Land Management" or "Landmanagement – eine Aufgabe für Bodenordnung und Landentwicklung" (MAGEL, 2002, 2003). Such or similar are the titles of the most recent contributions by German geodetic trained land management and land development experts. (e.g. Linke et al) Why?

There are two explanations for this:

- a) German colleagues seek more and more "to break out" out fields of work which they have hitherto regarded as too one sided or too narrow – in towns "only" land adjustment to create new building plots and valuations in the implementation of development plans, in the countryside in the main "only" the realisation of agrarian aims by means of land readjustment and the initial steps in land development. They want to be more comprehensively involved and to document this through the new term land management.
- b) The other explanation has, at least for the *Land* from where I come, Bavaria, more to be said for it. Because the geodesists in Bavaria who are engaged in land

administration, land readjustment and land development have already worked themselves far into the fields of land management, e.g. in that they increasingly advise on, plan and coordinate inter-communal development cooperation between several local communities, or guide communal Agenda 21 processes, they want to have an appropriate description for what they do. It should also motivate them to go further in this future oriented direction.

What does this future look like?

Developments are taking place both internationally and nationally which can be described by catch words which have long been well known in FIG circles, such as good governance principles, civil society, deregulation and decentralisation. In Germany at least it cannot be overlooked that the State is increasingly drawing back to the role of an activator, a facilitator or even only of a moderator. As against this functions and responsibilities are increasingly devolving to the local government level and to the citizens. German local government experts have long been saying that the "21st Century will be the century of local government" (see GLÜCK/MAGEL, 2000). Local government authorities however, to fulfil their growing functions and responsibilities, require increased advice and assistance by experts, such as the contributions of surveyors, whether in survey engineering to provide for elementary requirements, in geo-basis data management in setting up GIS systems (see BILL et al, 2002), in land administration or in urban or rural land management (MAGEL/WEHRMANN, 2001, MAGEL, 2001).

Against this background it will be understood why the highest scientific institution of German Geodesy, the German Geodetic Commission in its strategy paper "Geodäsie 2000 +", as well as the professional association of all German geodetic experts and member association of the

FIG, the German Survey Association (Deutscher Verein für Vermessungswesen, DVW) in the meantime also speak of the three pillars of Geodesy, GIS and Land Management (see Figure 7).

Independently of the extent to which or how differently land management in particular is understood and practised in Australia, Cambodia or in Germany, one thing should be very clear: geodesists in Germany assume in this field socio-politically very significant functions which cannot be associated with

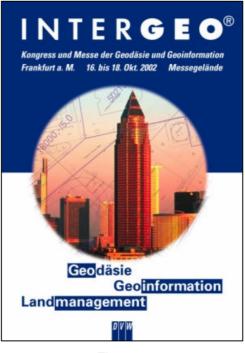


Figure 7

the traditional picture of the surveying profession. In order to carry out these functions, politicians and society must be aware of and take the geodetic experts seriously. For this to happen the geodesist needs above all two important capabilities:

- 1. an appropriate personal radiance with a clear awareness of ethical and social values
- 2. an excellent professional knowledge comprehensive both in depth and in width. Much has been said about this in the framework of the FIG (Tom Kennie or Stig Enemark etc.) and particularly in Commission 2 as well as in German professional circles (MAGEL, 1999).

The aim of my own university teaching in Munich is to turn the students into "well grounded specialised generalists", who go out confidently into the small or large world and perhaps one day give a paper here in Melbourne about current aspects of land policy and land management in Germany.

LITERATURE

BILL/SEUß/SCHILCHER (ed.) 2002: Kommunale Geo-Informationssysteme. Basiswissen, Praxisberichte und Trends. H. Wichmann Verlag.

BOER, B. and J. HANNAM (1991): Agrarian Land Law in Australia. In: Agrarian Land Law in the Western World. Edited by M. Rosso Grossman and Wim Brussaard, CAB International.

BUNDESVERFASSUNGSGERICHT: different volumes, such as e.g. 21, 73 (82 ff) - Grundstücksverkehr (1967) and 3, 407 – Baugutachten (1954).

DALE, P. (2000): The Importance of Land Administration in the Development of Land Markets – A Global Perspective. Proceedings of UDMS, TU Delft.

DALE, P. (2002): Land Policy – Towards an Integrated Approach. Keynote Address to World Bank. Regional Workshop on Land Issues in Europe and the CIS. 3. April 2002, Budapest.

DAVY, B. (1998): Die Stadt und ihr Boden. Einführung in die Bodenökonomie und Bodenpolitik. Lecture held on 6 December 1998, University of Dortmund.

DEININGER, K. and R. van den BRINK (2002): The World Bank's Land Policy Research Report. Presentation at USAID and WB – sponsored Side Event to the WSSD, Johannesburg 2002.

FIG (1991): The Surveyor's contribution to Land Management. FIG Publications No. 4 and 5.

FIG (2000): The Bathurst Declaration on Land Administration for Sustainable Development.FIG Publication No. 21.

FIG (2000): Cooperation between FIG and UN Agencies 2000-2003. Report of the FIG/UN Round-Table Meeting in Melbourne 1999, FIG Publication No.22.

GLÜCK, A. and H. MAGEL (ed) (2000): Neue Wege in der Kommunalpolitik. Jehle-Rehm-Verlag, München 2000.

GTZ (1998): Guiding Principles on Land Tenure in Development Cooperation. Schriftenreihe der GTZ No. 264.

HOISL R. (2002): Landed Property in Germany. Lecture at TUM Master Programme 'Land Management and Land Tenure', 2002.

KÖTTER, Th. (2001): Flächenmanagement – Zum Stand der Theoriediskussion. FuB 4/2001.

MAGEL, H. (1999): Gegenwarts- und Zukunftsprobleme der Bodenordnung und Landentwicklung. Materialensammlung des Lehrstuhls für Bodenordnung und Landentwicklung der TU München, Heft 23/1999.

MAGEL, H. (2000): The Change of Paradigms in European Rural Development and Land Consolidation. Proceedings UDMS 2000, "Land Markets and Land Consolidation in Central Europe", TU Delft.

MAGEL, H. and B. WEHRMANN (2001): Applying Good Governance to Urban Land Management – why and how. In: ZfV, Jg. 126, H.6.

21

MAGEL, H. (2001): Sustainable Land Development and Land Management in Urban and Rural Areas – About Surveyors' Contribution to Building a Better World. Keynote speech to Nairobi FIG-Conference.

www.ddl.org/fig tree/Council/president-magel.htm

MAGEL, H. (2002): Geomatik und Landmanagement – eine zukunftssichernde Einheit für Beruf und Gesellschaft. In: VPK 7/2002.

MAGEL, H. (2003): Landmanagement – Die neue Herausforderung an Bodenordnung und Landentwicklung. In: FuB 1/2003.

RAFF, M. (1999): Integration of Environmental Considerations into legal Decision Making at the Domestic Level. Paper presented at the UN-FIG Conference 25.-27. Okt. 1999 in Melbourne.

SEELE, W. (1979): Bodenpolitik für Stadt und Land. In: VR Jg. 1978, H. 8.

TING, L. and I. WILLIAMSON (1998): Land Administration, Information Technology and Society. SIRC 1998. University of Otago, New Zealand.

WILLIAMSON, I. (2000): Geomatic Trends in Australia from a Land Administration Perspective. Lecture at TU Munich, December 2000.

WINKLER, W. (1991): The Law of Agricultural Land Use in the Federal Republic of Germany. See Boer and Hannam.