

THEME 3

*UNITED NATIONS ECONOMIC COMMISSION FOR EUROPE
COMMITTEE ON HUMAN SETTLEMENTS
WORKING PARTY ON LAND ADMINISTRATION
Seminar on Public Institutions and Private Sector Relationships in the Creation of Land Registration Systems.
Tirana (Albania) 30-31 March -01 April 2000*

**ACCESS TO INFORMATION
MANAGED BY LAND REGISTRATION SYSTEMS**

By
Romeo Sherko, J. David Stanfield and Malcolm D. Childress
Land Tenure Center
University of Wisconsin--Madison

“A popular Government without popular information, or the means of acquiring it, is but a Prologue to a Farce or a Tragedy; or perhaps both.” James Madison, 1822

ABSTRACT

In the transition countries, the introduction of a market-oriented economy has been accompanied by a considerable increase in the amount of data created. Albania, in particular, has witnessed the rapid development of land information. However, little attention has been devoted to the economic and legal issues associated with the implementation and maintenance of land information systems in the post-1991 period, or to the complexities surrounding access and allocation in the public-private interface for land information products. The design of appropriate policies for guaranteeing fair public access to government information and for harmonizing legal issues related to land information such as copyright and privacy is becoming an important concern for Albanian government agencies. As one of the first discussions to address the legal and economic aspects of land information development in Albania, this paper calls for consensus-building activities, presents a conceptual proposal for information pricing and sharing, and suggests the creation of a National Geomatic Association.

1. Introduction.

Access to land information in transitional countries, in this case Albania, is a topic which has received scant attention. As the period of privatization of properties works its way to completion and consolidation, new needs for land information in a market-economy context are emerging, both from private parties and from government users with changing mandates. In the face of these developments, the questions of access to what land information, for whom and at what cost, are becoming more urgent. These questions are closely linked with fiscal issues, conceptions of the role of geographic information in economic development, and the role of geographic information in the creation and maintenance of democratic institutions.

The discussion presents examples which characterize land information institutions in transitional economies as being restrictive in the face of emerging new demands while simultaneously facing difficult financial challenges. To avoid the potentially large social and economic costs which we view as likely consequences of the further institutionalization of current arrangements, we first present an economic argument for financing policy which stresses regulation of pricing by government land information monopolies and the encouragement of competition for non-core land information products among public, public-private and private entities. Recapitulating the differences between US open access and European restricted access traditions, we argue in favor of a variant of open access policy which is balanced by the need to keep institutions financially viable through a minimum level of revenue generation. Public funding of raw data collection, coupled with intra-governmental data sharing and the encouragement of a fair market for secondary data products appears to be a course which can work, but only if actions are taken in the near future to encourage this development path. Copyright and privacy concerns loom increasingly large as more original informational products are created and more personal data is collected, while becoming more easily reproduced and accessed through electronic means. We recommend that basic principles for preserving privacy should be incorporated into the geographic information policy that we are advocating. This argument is linked in practice to the proposal to carry-out consensus-building activities about land information access, carry out further research on data needs and the real costs of these data, and to create a National Geomatic Association as a coordinating body for work on legislation, standards, formats and pricing regulations for geographic information.

2. Land Information Access Policy in Albania.

There has been a lack of legislation in Albania to regulate the policies of contemporary government agencies related to the creation and distribution of information, although some out-of-date laws and governmental decisions are still erratically enforced. For example, the Decision of CM, N. 110, dated May 17, 1984, states that any kind of topogeodetic work conducted in Albania should follow the regulations defined by the Military Topographic Institute, and the agencies should send this institute a copy of the general plan of allocation of industrial sites, the coordinates and the heights of all construction objects, catalogues with the coordinates of the densifying points, and many other data related to the work performed. While such a decision 'made sense' for the time when it was drafted, today, in a market economy society, it is completely outdated, but still technically in force.

Meanwhile, the needs of new situations, such as the access policy for raw data, registry index maps and electronic copies of *kartelas* (i.e., title documents) have not been addressed. Cooperation of state institutions among themselves and with the private sector in order to draft proper legislation about land information is a key in achieving a solid legal basis for the future of land information administration. While intentions to draft legal acts that would exclusively serve only the interests of public institutions and would restrict access of private agencies to information might work in the short run, such legislation would not likely survive the new "game" of market economics in the long run.

Traditionally, the government has been the only collector of spatial data in Albania. In the conditions of a centralized and often uncoordinated economy, each governmental ministry, through its dependent institutions, built its own spatial databases. Large-scale mapping data were collected by the Ministry of Defense (scale 1:10,000 and larger), and aerial photography was conducted sequentially in one area of Albania after another each year until 1989. The Ministry of Agriculture possessed cadastral data for each cooperative's fields throughout Albania, and periodically collected data on land productivity, for planning purposes. Maps were produced for forest and pasture lands. The Ministry of Construction produced urban maps of roads, buildings and other topographic features at the scale of 1:500 and 1:1000 for almost every city. Others, such as the Ministry of Energy and the Ministry of Transport, generated and maintained their own spatial data. The existing data generated during the previous regime are the main source of spatial information and a promising starting point for building larger future databases.

When Albania began to move towards a market-oriented economy, most of the government institutions became more restrictive in providing access to their data, in part because it was the most valuable asset they had, and in part because there were no rules established for providing of that information to other users. Efforts were made by the government to limit the individualistic tendencies of institutions for selling the information. For example, a recent Decision of Council of Ministers, (No. 505, dated October 26, 1993), states that "all topogeodetic archives of institutions that have maps, geodetic points, and other data, which were produced before 1992, and which serve the Project of Immovable Property Registration System, should be made available to this Project with no charge." In practice, however, such efforts to legislate data sharing have had limited success.

Rapid development of the private sector in Albania has changed the scenario in terms of who is collecting data and generating information. Today, the private sector functions not only to serve public needs on information processing, but has also started to collect and create its own databases. In this new context the cooperation between the public and private sector to avoid the duplication of efforts for information gathering and processing becomes very important. Creation of data clearinghouses to provide data on the existing land information in Albania would be the first step for increasing the efficiency of such cooperation.

Historically, the sole purpose of collecting data was for the government to better control and plan the economy. Thus, it never occurred to government agencies that the public might ask for access to government data, because there was no public need for it at that time. While planning was the government's main purpose in the collection of data, efforts from different ministries were often not coordinated, resulting in a lack of willingness to share the data among institutions. The lingering past mentality of not providing data to the public and not sharing it with other institutions, the lack of enforcement procedures,

different existing political connections and interests, and the temptation to withhold information to bargain for a good sale price to supplement agency budgets has meant that compliance with decisions such as Decision 505 of 1993 has been weak.

One State enterprise for example, has had the responsibility of producing city topographic maps at the scale of 1:500 and 1:1000. Because of restitution and compensation programs, dynamic urban land markets, and many ongoing foreign projects related to city infrastructure, these maps are in high demand. Self-financing policies, introduced by the government as incentives for state-budget institutions, have been taken, in some cases, to extremes. Despite the fact that its largest field survey was conducted prior to 1992, the enterprise management at one point decided to charge any potential user of these maps as if the data were being produced for the first time, i.e., the full production costs for every user. This looks very much like the exercise of monopoly power, and would seem to suggest a potential for both stronger regulation and stronger competition in the provision of large-scale city maps.

After land was privatized, the purpose of collecting information about land also changed. Currently, private users of such information are increasing in number. While the private sector has faster realized public needs for information and is driven by customer demand, state organizations are still not finding the proper means to use the information that they own for their own benefit. A closer cooperation between public and private sector would assist in devoting more attention to the customer needs, and both sectors would benefit from this cooperation.

Foreign-funded programs are also generating new land information. Although it is well understood that the assistance provided by foreign aid is intended to serve broad national interests, it is now apparent that some institutions are tending toward non-cooperation or failure to share data. In addition to the reasons mentioned above, the unwillingness of some of the foreign aid providers, often guided by their own narrow interests, (i.e. “the project must continue,”) has contributed to these tendencies.

Clearly defining the main goals of data acquisition, the destination and maintenance of the final data products after project termination, and establishing the means of achieving these goals should be primary concerns of foreign aid, from the beginning of a project. One research institute, for example, received a large grant to build a modern GIS unit (Arc/Info operating in a RISC-Unix machine). People were trained, inside and outside of Albania, in the use of the equipment and Arc/Info software. At that time, this aid was perceived as valuable for the future of mapping and GIS in Albania (i.e. would create beneficial externalities). Despite these intentions, access to the new technology has not been facilitated. The Institute has not developed cooperative arrangements with other public and/or private mapping and surveying units. The staff originally trained to operate the system has left the institute and the skill level of engineers has declined. Insufficient income has been generated to maintain and upgrade hardware and software.

Although it might be administratively difficult, establishing partnerships between foreign aid, the public institution receiving aid, and private sector interested in land information administration could improve the outcomes of these projects and would ensure the continuation of these initiatives even after aid is consumed. For example, the land use project within the one research institute created the potential for an efficient GIS unit, but is now closed and not used for the simple reason of lack of money from the donor and

insufficient funding from the state budget to enable the Institute to further develop its GIS capacities.

Land information databases and GIS are expensive to create and maintain. The Albanian government, recovering from the collapse of the previously centralized economy and suffering from the recent failure of get-rich-quick financial schemes, is now unlikely to subsidize expensive systems. While tax revenue is the usual choice to cover most initial investment in land information (the public good argument), Albanians have not been successfully taxed in recent years. Despite well-written laws, the government has only been able to partially collect expected revenue from customs fees, income taxes and from taxes on profit of private businesses. Taxation schemes are often associated with cheating and corruption. There has been no widely successful mechanism for collecting taxes on the personal income of citizens, except for public employees. The Law 7805, on "Property Tax" was passed in March 1994, but a decision of the government stated the law should not be enforced before 1996. Later, another decision postponed the enforcement again until 1998. The current inability of the government to fully collect taxes is pushing policies of information dissemination increasingly in the direction of revenue generation.

One way to reduce the demand of state institutions for financial resources from the Government will be to enter in partnership with the private sector for the creation and maintenance of land information in order to share the costs. Well-written rules to regulate such partnerships are necessary in order to generate expected benefits for both parties. While the private sector participates to cover a part of the expensive database systems to be created, it should be compensated by state organizations via easing access to information, technology, and technical assistance.

Many government agencies in Albania have not withstood the rapid changes from a centralized to a market-oriented system, administratively or financially. The low budgets of these agencies, i.e. low salaries for employees, are unable to attract and maintain skilled professionals and experts. Instead, many of them have chosen to establish their own private business or leave the country for better opportunities abroad. Information about land, characterized by large-scale involvement of up-to-date technology, requires professional involvement from the fields of surveying, mapping, and computer science. In its absence data soon become out-of-date and their usefulness declines. One way to avoid such deterioration is for public sector institutions to cooperate with commercial business.

There now exist a considerable number of private companies in surveying, mapping, and GIS in Albania. There are companies that have successfully joined together professionals from academia and engineers from the field, and have produced a number of GIS models for different projects in Albania. More promising private companies are emerging every day. It is expected that private sector will continue to strengthen its role in the GIS and land information sectors. This development would inevitably subject government agencies with monopolistic tendencies to some degree of competition.

Facing the realities of serving a new clientele and providing for financial sustainability is one of the most difficult responsibilities for countries that rapidly change from an old system to a new one. The desire of state institutions to keep the same control over the data as in the past is extremely difficult and costly in conditions of a market economy. Similarly, attempts by the private sector to benefit from information flows from state institutions will not last forever. In these conditions the best way is for both parties to find means of

cooperating with each other to bring to the table what they can best offer. Competition between the public and private sectors has not proven to generate good results, especially in the conditions of a democratically growing country such as Albania, which lacks a precise legal basis for information in general, and of land information in particular. Instead, by building legal and administrative basis for potential cooperation between public and private sectors, the outcomes of any initiative can only be improved. However, no claim should be made that this process is easy.

Government may assist, or limit, the role of the private sector by providing, or restricting, open access to data. In the long run, public-private cooperation appears likely to enhance social welfare if it breaks down monopolistic control, drives down costs and improves quality and accessibility of data. If competition remains narrow, however, or public-private cooperation simply creates new monopolies, social welfare is unlikely to be enhanced. The encouragement of competition and public-private cooperation gains support from the economic characterization offered in Section 2. If raw data are considered public goods, widely shared within government and made accessible for reasonable prices, competition in processed data products is encouraged and beneficial externalities are much more likely.

Traditionally, the Albanian government has had a monopoly on any data generated in the country. It is fair to say that an attitude of controlling such a monopoly has been deeply embedded in the minds of many government agency administrators. As a result it is rare to find administrators who advocate 'open access' to data. On the other hand, grave consequences may result from the tendency of government agencies to contract with preferred private companies, and, thus, transfer the control over the data into a limited number of private hands with similar monopolistic tendencies. Providing information equally to all private entities should be a priority for Albanian government agencies, policy makers, and decision takers.

The purchasing power of the Albanian populace is low. Despite the intention of the government to commit to revenue generation policies, charging the public too high a price for government data will limit the number of people who could pay for, and have access to, the data. Hence, government databases with even moderate costs for access will be of less use to society as a whole while income inequality could be exacerbated by the asymmetric availability of information to wealthier parties. Making the information open to the public and increasing the cooperation with the private sector would create the potential for market competition, which would in the future force prices to decline.

One additional reason for advocating open public access to information in the conditions of Albania relates to the recent serious engagement of Government in fighting corruption. There is a chance that monopolizing information and restricting public access to it would create the possibility of public servants to consider information as their own and to engage in illegal actions. Open access, in contrast, accompanied by reasonable information pricing, is the long-term policy that should be embraced by Albanian public service institutions to reduce possibilities of corruption.

Because the Albanian government is preoccupied with a multiplicity of other important problems, there is a risk that issues of information policies might be overlooked. Despite the fact that Albania is lagging behind many of its neighbors in the movement toward an "information society," it is inevitable that government, citizens, and private businesses will

soon be forced to encounter the legal and economic issues related to land information. It is in the best interest of Albania that these issues be addressed now, when the information base has just started to grow rapidly.

3. SOME PROPOSALS

3.1 Consensus Building

Reaching consensus about the rules, which govern access to information about land, requires exchanges of ideas and concerns. Consensus building requires the involvement in these exchanges of government agencies, academics, citizens, data suppliers, private businesses, and lessons from other country experience. In order to create a more precise evaluation of the existing policies, attitudes, controversies, and the potential trends, workshops involving public and private agencies which use land information should be held on the question of rules of access to land information. Systematic investigation of written and unwritten rules of access to land information, which the producing agencies have and would like to have, would be useful. Data on the costs of production, reproduction and operation for the main governmentally supplied land information products should be gathered to serve as a basis for guiding pricing. The results of these workshops and investigations should help to improve the design of such policies and drafting of the proper legislation.

Institutionally, it would be useful to create some sort of National Geomatic Association (NGA) composed of representatives of public and private agencies, which produce, maintain or use land information. A NGA could be placed in charge of guiding and assisting investments in a national geographic information infrastructure, and also would help draft legislation and implementation regulations for protecting privacy and assuring access to land information.

Joining the European initiative for the creation of a European Geographic Information Infrastructure (EGII, 1996) should be one of the main goals of a NGA, including the standardization of cartographic data according to European standards.

3.2 Proposal for Land Information Pricing

The following graphical presentation integrates the ideas and recommendations presented above concerning access to land information with assumptions about the sequencing of land information and the economic development trajectory of transition countries (see Figure 1). It is proposed that:

- a) All *existing spatial data* created during the centralized economy for purposes of the government should be provided to any interested party for the cost of dissemination, including operating costs (line 1-2).
- b) The spatial data that are created by government agencies, using state budgetary funds, as upgrades *of the existing data*, should be distributed with a price equivalent to expected average cost of producing and maintaining the upgraded data, due to the facts that the existing data in most cases is out of date, extra work is needed to provide the public with the

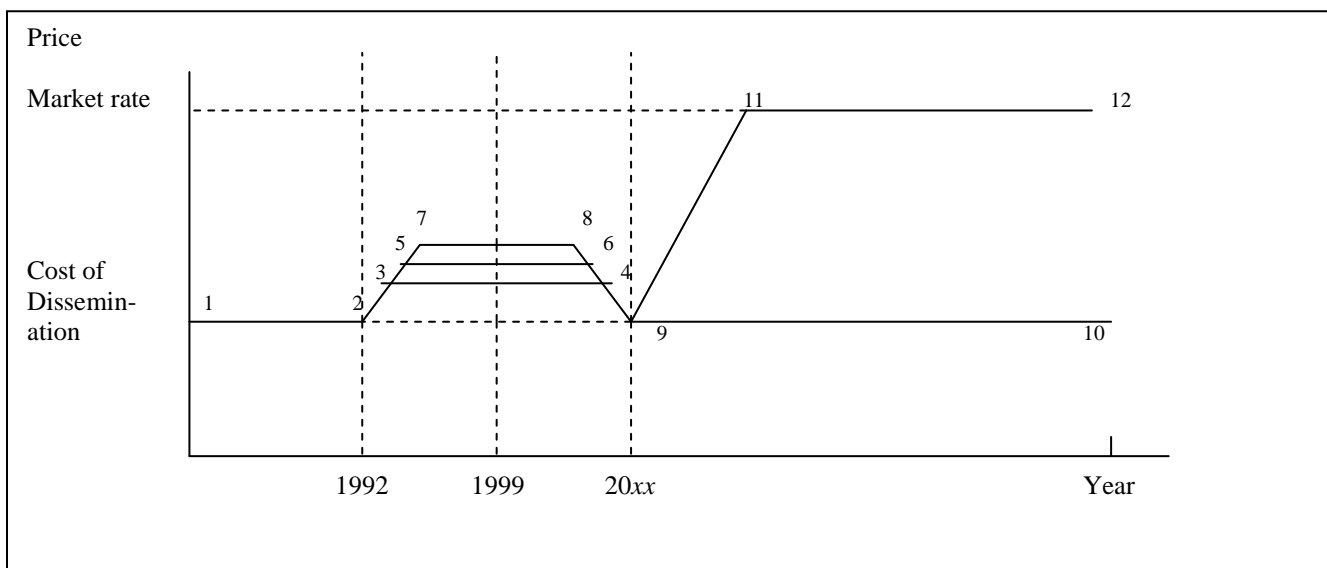
data requested, and that government budgetary financing will probably not be regularly forthcoming for these purposes (line 3-4).

c) Spatial data that are *newly* created by foreign-funded projects may be distributed at a price higher than the cost of dissemination, but overseen by a supervisory entity like a NGA; this will provide financial resources that the new institutions will use during their reconstruction (line 5-6).

d) Spatial data that are *newly* created by government agencies, using the state budget, should be distributed to private users for a price higher than the cost of dissemination, but lower than the market rate, assuming it is higher. This “cost sharing” will help the institutions reconstruct, while also encouraging wide use of land information and stimulating private and public-private provision of new land information products (line 7-8).

e) At a *certain* time (“year 20xx”), when economic conditions can be expected to have improved, the raw data and unelaborated products created by the government agencies *for government purposes* should be distributed to public for the cost of dissemination (line 9-10). The value-added services for private needs and not for government purposes should be distributed to the requesters at a competitive market rate (line 9-11-12). In this way government will neither be monopolizing data paid for by the public or giving special benefits to any subset of users.

Figure 1. Pricing of Geographic Information in Transition Countries over Time



Year 20xx identifies the time when a transition country, for example, Albania, would have recovered from the economic consequences of the past, and would have entered the information age with characteristics of a western country: a democratic government leading a democratic society; satisfactory economic development; strong private sector; full tax collection by the government; increase in the purchasing power of the public; and precise legal frame for information policies.

3.3 Proposal for Spatial Data Sharing

While spatial data sharing is considered one of the means to increase the usefulness of the data collected, narrow short-term mentalities and selfish ambitions shown by different public or private institutions have limited such a process.

In the following paragraphs we present some arguments for the land registration system in Albania to implement policies of data sharing and open access to base core data.

- a. The effort to create a functioning Immovable Property Registration System (IPRS) is one of the most serious and successful large-scale projects in Albania. This system creates the basis for the development of a legally secure land market, expected for so long by the majority of Albanian people. In order to fulfill this purpose, the increase of the number of people that should and could use this system becomes a priority. The only way to achieve this purpose is to design proper policies for data sharing and open public access to information of IPRS. These policies create premises for equal rights of individuals to public data, one more condition for the movement toward a democratic society.
- b. From the beginning of the project, IPRS was designed to be independent of politics. Keeping the land registration system far from politics is a necessary condition in order for the system to function properly in the long run. Besides other measures, one way to reduce the impact of political changes in Albania is for the registration system to be open to public. Otherwise it could become a source for improper actions by political forces.
- c. One of the unfavorable consequences inherited from the old system is the lack of cooperation and coordination among different institutions in Albania. Such cooperation is hard to achieve even in a democratic society. However, because IPRS data could and will serve interests of many other ministries and public and private institutions in Albania, policies for data sharing should be drafted as soon as possible. Data sharing should not be considered as a process of "giving out data". Instead IPRS should use data sharing to benefit from other institutions as well. For example, the Ministry of Finance is interested on ownership data, as a means to ease the process of tax collection. One way that IPRS could profit from sharing data with this Ministry would be to arrange an agreement that the Ministry of Finance reports back to IPRS all the discrepancies in ownership or identification found or reported by taxpayers. This would serve IPRS to correct their data with a minimal cost.
- d. Continuous improvement in the accuracy of registration data is the premise for IPRS to start thinking about the creation of informative value-added products, which could be sold to state or private buyers, and so generate income for the institution. For example, road construction companies need information on the ownership of land along the highway. IPRS could produce these (value-added) data and eventually sell them to the private, interested parties at a market price.
- e. Because IPRS is one of the first institutions to produce massive data for which broad categories of users are interested, policies for the implementation of open, free access should be flexible in order to respond to market changes that might happen in the future.
- f. By applying policies of data sharing and open access to information, the number of users of this information would increase. Having more participants in data sharing initiatives would

help to create better ideas for the creation of spatial data standards and GIS, which will consider the opinions of a larger group of data users and providers.

- g. In the process of sharing data with other agencies, the IPRS would enrich its own databases as well, which constitutes the basis for the creation of different GIS coverages. Creation of such relationships with other agencies would create also the potential for collaboration in the foundation of a National Geomatic Association in Albania.
- h. Only if led by a policy of data sharing and open access to information, could a better investigation of economic and legal aspects of land information, such as copyright, privacy, or liability be performed. The results of such analysis could then be used to implement appropriate legislation related to the issues of land information.

3.4 Public Access to Land Registration Data

Section 30 of the Law No. 7483, 13.07.94, "On Immovable Property Registration", states that "Any person can examine and consult any register and can request a certified copy of it, a part of the Registry Index Map, any filed instrument or survey plan deposited in the Registry, by presenting a written request and by paying the appropriate fees." It would benefit Registration Offices in the Districts to set up a facility, either computerized or manually managed, to allow the public to come into the office and search for the information that they are seeking. Such a facility, which would operate after the public service hours, would not only generate income for the registration offices (fees for such searches have to be defined), but it would also ease the registration process for the customer that will need to register a transaction. At the same time, an employee of a Registration Office that would assist the customer in his/her search could also advise on the kinds of documents that he/she will need to perform a transaction in the future. Such assistance to the public would reduce the workload in the Registration Office during the public service hours.

APPENDIX A

THE COPYRIGHT-CONTRACT APPROACH

Copyright is the internationally recognized form of intellectual property rights "available to owners of databases and compilations" (Lopez, 1993). A copyright has two main purposes: (1) to afford authors a degree of monopoly over the protected work, thereby encouraging useful human endeavor and that investment in productive pursuits; (2) the more subtle, yet equally important; to encourage publication and distribution of information" (Holland, 1994).

In Europe copyright protection for GIS databases is "generally reserved for the original supplier or arranger of the raw digital data" (Lopez, 1993). Copyright systems throughout Europe fall generally in three categories:

- the *droit d'auteur* system - Continental Europe;
- the common law system - UK, USA and common law countries; and
- the socialist system - Former Soviet Union (FSU) and, to a large extent, Eastern Europe.

European government agencies generally claim copyright on their public information holdings. In the United Kingdom for example, Ordnance Survey (OS) maps and GIS databases are protected by Crown Copyright. Users of OS mapping products must apply for a license to use the data, while complying with the Crown copyright regulations. The license fees or charges vary from a minimum marginal cost necessary to cover the costs of data dissemination, to substantial charges designed to recover the total costs of database development (Lopez, 1993). In most EC countries, 'creative expression' is required for a work to classify for copyright. However, the interpretation of "creative expression" may not always be the same, especially in the case of maps and GIS, where the distinction between the expression and the factual information seems to be even harder.

In the US, the 1976 Copyright Act provides the legal frame for the protection of databases. There is a difference between the definition of copyright in the United States and in Europe. Instead of 'creative expression' of European Copyright Law, another ambiguous term is used in the US law: 'original work of authorship'. Moreover, while copyright protection for databases in the US is becoming narrower, "the proposed legislation within Europe points to broadened copyright protection" (Lopez, 1993).

Terms such as 'creative' and 'original' allow for misinterpretations that often require the interference of courts in solving sophisticated cases. It is even harder to define copyright in the case of maps and/or GIS. For example, 'originality' is a requirement for copyright of maps, just as for databases. While maps as a whole can be original, each specific feature on a map may not. Under such an interpretation, map copyright could extend to maps as a whole, but not to specific features such as roads, water bodies, and vegetation. Johnson notes that "digital maps could easily be manipulated, similar to databases, to produce new, copyrightable maps" (Johnson, 1995).

In Albania the idea of copyright is new. In the past, all published work has been produced for the government, which had full control over any product, regardless of the level of 'creativity' or 'originality', sometimes even confiscating the cash prizes given to Albanian figures during international competitions. In May 1992, the Parliament

approved Law 7564 on “The Author’s Rights”, which was based on a European model. This law defines the moral and financial rights, and the life duration of copyright. However, no section of this law deals with the copyright of computer databases in general, and computerized mapping and surveying data, or GIS, in particular. Special legislation related to computer databases is needed. Attentive drafting of legislation is required, because extremely broad copyright might make data less accessible as information becomes more proprietary. Beyond looking at American and Western European experiences of copyright, Albanian officials would profit from a careful investigation of copyright laws, enforcement procedures, and their subsequent results in other Eastern European countries.

Copyright alone may not be sufficient to avoid illegal actions by irresponsible individuals and to hold them accountable. Recently, contracts or licenses have been used in addition to copyright provisions:

“By contract, the provider may ensure a broader scope of protection than copyright would afford.... Moreover, by contract, the information provider may secure protection for material that may not be copyrightable. From the provider’s point of view, contract may therefore prove a more attractive means of obtaining the same, or more, protection than that available under copyright” (Ginsburg, 1994).

Parties to the contract can, and should, specifically define the rights of the original author, the rights of the buyer, the limitations on secondary uses, and the penalties in case of default. Nevertheless, Johnson points out that, “the one-sided nature of the contract (usually drafted by the GIS agency) could be an hindrance to the enforcement of the agreement” (Johnson, 1995). How strongly courts will enforce copyrights and contracts regarding new forms of land information in Albania is still an unanswered question.

APPENDIX B

PRIVACY

The rapid development of technology, information, and large databases also has important implications for individual privacy. Legislation related to privacy written years ago is often made irrelevant by new technological developments. As Onsrud points out:

“Although the search capabilities and provided databases [are] extremely valuable to small businesses, they also [are] valuable to those wishing to engage in burglary, fraud, sexual harassment, and a host of other illicit purposes” (Onsrud, 1994a).

In The United States, the major federal privacy statute is the Privacy Act of 1974. Onsrud describes the key provisions of the act:

This privacy Act: (1) allows individuals to determine what records pertaining to them are being collected, maintained, or used by federal agencies; (2) allows individuals to prevent records obtained for a particular purpose from being used or made available for another purpose without their consent; (3) allows individuals to gain access to such records, make copies of them and make corrections; (4) requires agencies to ensure that any record which identifies individuals is for a necessary and lawful purpose, and (5) requires agencies to provide adequate safeguards to prevent misuse of personal information (Onsrud, 1994a).

However, critics argue that the provisions of the act have been poorly enforced and adhering to privacy protection guidelines has not been a priority for federal agencies (Flaherty, 1989). There are other acts that regulate the privacy issues under specific circumstances such as the 1988 Computer Matching and Privacy Protection Act. Post contrasts this US legislation with similar European laws:

Instead of imposing the consent requirement of individuals for personal information that the commercial sector may collect, as in Western Europe, legislative attempts in the US intend to ensure the accuracy of the data collected or to impose other conditions concerning the use of the information” (Post 1989).

The European Community is currently considering even stricter rules on the protection of personal data, although there is diversity from one country to another. One of the more visible examples in which privacy concerns have altered government actions is the recent cancellation of national censuses in the Netherlands and West Germany. Because these governments were unable to accommodate their citizens’ concern over privacy and the potential misuse of personal information, public resistance forced cancellation of the censuses and the many substantial benefits of census taking were lost (Flaherty, 1989). Raab points out that privacy protection concerns have accompanied the fall of the socialist bloc:

“Among the members of the EU, Italy and Greece have not yet adopted a national data-protection law, and until very recently there was no Belgian legislation of this sort. It is interesting, however, that the dramatic changes occurring since 1989 in Europe, including the dissolution of the Former Soviet Union and the overturning of Communist regimes in its former satellites in Eastern Europe, have been paralleled by significant attempts to legislate privacy in those countries....Hungary

and the Czech and Slovak Republic, for instance, now have national laws, and they are being considered in other countries as well". (Raab, 1994).

In the areas of privacy and data protection, Albania has been behind the other Eastern European countries. Legislation concerning personal privacy and freedom of information has been drafted and passed but no implementation has been attempted. Since no large databases for individuals have been created, privacy protection has not yet been a concern for Albanians. The creation of the IPRS will soon change this situation. Nevertheless, Albania is experiencing an increase in the number of searches, some times for data on politicians. The land information community should not wait for privacy issues to reach crisis levels before taking action. Knowledge of the principles for privacy protection related to the land information community (Onsrud, 1994a) will be helpful not only for future legislation in transition countries but also to serve as guidelines given the current lack of formal law. Some of these principles are:

“Collection Limitation Principle: There should be limits in the types and extent of personal information collected for, contained within, or used in conjunction with geographic information systems. Collection should be lawful, fair, and with the knowledge and consent of the individual.

Data Quality Principle: Personal data should be relevant to the purposes for which they are to be used.

Purpose specification principle: The purposes for collecting personal information should be stated upon collection.

Use Limitation Principle: Personal data should not be disclosed to others, made available to others, or used for purposes other than for which the data were collected without the explicit consent of the subject data or by the positive authorization of law.

Security safeguards principle: Personal data should be reasonably protected by the data controller/administrator.

Openness principle: Developments, practices, and policies, with respect to personal data, should follow a general policy of openness.

Individual Participation principle: Data subject should be allowed to determine the existence of data files on themselves and be able to inspect and correct data at no cost or marginal cost.

Accountability principle: GIS data controllers, whether in the public or private sectors, should be held accountable for complying with these guidelines" (Onsrud, 1994a).

Consideration of economic and legal concerns in the transition country context provides the basis for some concrete proposals, which are presented in the following section.

REFERENCES

Dansby, Bishop H.; Onsrud, Harlan J.; and Milrad, Louis H., 1992, "GIS Legal Issues.", ACSM Bulletin, Nov/Dec 1992, 140, 40-43.

EGII Policy Document, 1996, GI200: Towards a European Geographic Information Infrastructure.

Epstein, Earl F. and McLaughlin, John D., 1990, "A Discussion on Public Information: Who Owns it? Who uses it? Should we limit access?" ACSM Bulletin, October 1990, 128, 33-38.

Ginsburg, Jane, 1994, "Surveying the Borders of Copyright.", Journal, Copyright Society of the U.S.A.: 322-334.

Flaherty, David H. (1989). "Protecting Privacy in Surveillance Societies", Chapel Hill and London: The University of North Carolina Press. 467.

Hernon, Peter, 1993, "Equity in Public Access to Government Information.", Government Information Quarterly, **10:3**, 301-304.

Holland, William Shephard, 1994, "Copyright, Licensing and Cost Recovery for Geographic and Land Information System Data.", *Proceedings from the conference on Law, Information Policy and Spatial Databases*, October 28-30, 1994, Tempe, AZ: NCGIA: University of Maine, Orono, 152-164.

Johnson, Jeff P. and Onsrud, Harlan J. (1995) "Is Cost Recovery Worthwhile?" Proceedings of the Annual Conference of the URISA. San Antonio, TX: URISA 1: 126-136.

Johnson, Jeff P. and Dansby, Bishop H., 1994, "Liability in Private Sector Geographic Information Systems.", *Proceedings from the conference on Law, Information Policy and Spatial Databases*, October 28-30, 1994, Tempe, AZ: NCGIA: University of Maine, Orono, 285-292.

King, John Leslie. 1995. "Comments on the Economics of Geographic Information and Data Access in the Commonwealth of Massachusetts," in H.J. Onsrud and R. Rushton, eds. *Sharing Geographic Information*. New Brunswick, New Jersey: Rutgers University Press.

Lopez, Xavier, 1993, "Database Copyright Issues in the European GIS Community.", Government Information Quarterly, **10:3**, 305-318.

Madsen, Wayne (1992), "Handbook of Personal Data Protection.", New York: Stockton Press.

Matsunaga, Keene and Dangermond, Jack, 1994, "Promoting a Free Access or Minimal Cost of Dissemination Arrangement for Government-Held Geographic Information Systems Data.", *Proceedings from the conference on Law, Information Policy and*

Spatial Databases, October 28-30, 1994, Tempe, AZ: NCGIA: University of Maine, Orono, 39-51.

Mulcahy, Karen A. and Clarke, Keith C., 1994, "Government Digital Cartographic Data Policy and Environmental Research Needs.", GIS/LIS '94 Central Europe, Budapest, Hungary, June 1994, 47-53.

Onsrud, Harlan J.; Johnson, Jeffrey P.; and Winnecki, Judy (1996 forthcoming), "GIS dissemination Policy: Two Surveys and a Suggested Middle Ground Approach." *Journal of the Urban and Regional Information Systems Association*.

Onsrud, Harlan J.; Johnson, Jeff P.; and Lopez, Xavier, 1994a, "Protecting Personal Privacy in Using Geographic Information Systems.", *Proceedings from the conference on Law, Information Policy and Spatial Databases*, October 28-30, 1994, Tempe, AZ: NCGIA: University of Maine, Orono, 239-256.

Onsrud, Harlan J. and Reis, Robert I., 1994b, "Law and Information Policy for Spatial Databases: A research Agenda.", *Proceedings from the conference on Law, Information Policy and Spatial Databases*, October 28-30, 1994, Tempe, AZ: NCGIA: University of Maine, Orono, 2-11.

Onsrud, Harlan J., 1990, "Liability Concerns for Surveyors Contributing Data to Public Land Information Systems.", *ACSM Bulletin*, 125, 20-24.

Post, R.C. (1989), "The Social Foundations of Privacy: Community and Self in the Common Law Tort.", *California Law Review*, **77.5**: 957-1010.

Raab, Charles D., 1994, "European Perspectives on Protection of Privacy.", *Proceedings from the conference on Law, Information Policy and Spatial Databases*, October 28-30, 1994, Tempe, AZ: NCGIA: University of Maine, Orono, 257-265.

Rhind, David, 1994, "Spatial Databases and Information Policy: A British Perspective.", *Proceedings from the conference on Law, Information Policy and Spatial Databases*, October 28-30, 1994, Tempe, AZ: NCGIA: University of Maine, Orono, 82-92.

Taupier, Richard P. 1995. "Comments on the Economics of Geographic Information and Data Access in the Commonwealth of Massachusetts," in H.J. Onsrud and R. Rushton, eds. *Sharing Geographic Information*. New Brunswick, New Jersey: Rutgers University Press.

Issues for discussion groups:

1. Open vs. restricted access to land information

Describe the information access policy in your country. Describe what is the rationale for the choice. Describe if there is any tendency to change that policy and under which rationale.

2. Pricing of land information

Describe the policies that are followed in your country for pricing land information of public registries. Describe if there is any price difference between the core information and the value-added products and services. Describe if there is any difference in pricing information sold to public agencies compared to prices to private sector.

3. Public and Private Partnership

Describe if there have been partnerships between public and private sector, and the governing rules for such partnerships. Have there been cases of creation of information monopolies? Does private sector participate in drafting legislation related to land information? Is there information flow from public institutions to private hands? What can public and private sector offer to each other in order to benefit from these partnerships?

4. Geographic Information Infrastructure

In your country, is there any national entity in charge of coordination of activities related to land information? What kind of organization (for example, association, agency under a Ministry) does exist? If such organization does not exist, what form are you expecting that organization to be?

5. Sharing Information

Describe if there exist regulations for information sharing among public institutions in your country. What are the main reasons for lack of information sharing? What are the benefits of an information sharing policy?

6. Customer Orientation

Describe if public institutions in your country consider the customer (public) as driving force for their survival. Is there any mentality issue (from the past) in the role of public institutions?

7. Misconduct by Public Officers

Describe if problems of dishonesty from the public officers have arisen. What are the reasons for such misconduct? What are different ways to avoid or reduce such phenomena?

8. Copyright and Privacy Laws

Describe legal basis and regulations related to issues of copyright and privacy laws. If not yet addressed, what are the trends that you expect? Describe the advantages of the choice made in your country.