

What Have Americans Paid (and Maybe the Rest of the World) for Not Having a Public Property Rights Infrastructure?¹

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Key words: USA, Cadastre, land registration, land rights infrastructure

ABSTRACT

The United States of America, unlike most of the developed countries, does not have a public federal or state property rights infrastructure. In an article written in 2002 and titled «*What do Americans pay for not having a public land registration system?*», Mr Bengt Kjellson estimated the costs of this weakness in the US economy at \$20 billion annually (Kjellson, 2002).

In the new context of the mortgage crisis in the USA and the economic crisis it has triggered worldwide, we can reformulate the question this way: «What have Americans (and maybe the rest of the world) paid for not having a public property rights infrastructure?». In effect, we believe that a good property rights infrastructure could have mitigated the effect of the land market crisis and thereby avoided the loss of many hundreds or even thousands of billion dollars.

This paper indicates that the lack of a sound property rights infrastructure in the USA has contributed to the collapse of its land market. Of course, this is not the only cause of the mortgage crisis. The negligence of the government to control the banking system and the fact that banks have been too loose in their loan controls is obvious. But in crisis times, good, reliable, and accessible information available on time is of critical importance. When this information is missing or hard to obtain without any guarantee of reliability the crisis will become like a storm in the warm waters and it becomes a hurricane. And this is what happened last year in the USA.

In its inauguration speech the US President Barack Obama said «Starting today, we must pick ourselves up, dust ourselves off, and begin again the work of remaking America»². So, why not remake America and its land market on more sustainable basis?

¹ This paper represents the personal opinion of the authors only and should not be considered as the opinion of their organizations.

² Source: CBC News : <http://www.cbc.ca/world/story/2009/01/20/obama-speech-text.html>

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1. WHAT IS A PROPERTY RIGHTS INFRASTRUCTURE

What is a property rights infrastructure and how does it support the land market?

A property rights infrastructure is a system that can help the user to answer such simple questions as: Who is the owner of this property? Is there a mortgage on it? If so, what is the amount and who is the lender? What is the value of this property? Have the municipal taxes been paid? Are there other rights or constraints restricting the use of the property?

The International Federation of Surveyors (FIG, 1995) defines a cadastre as a “parcel based and up-to-date land information system containing a record of interests in land (e.g. rights, restrictions and responsibilities). It usually includes a geometric description of land parcels linked to other records describing the nature of the interests, ownership or control of those interests, and often the value of the parcel and its improvements. It may be established for fiscal purposes (valuation and taxation), legal purposes (conveyance), to assist in the management of land and land-use control (planning and administration), and enables sustainable development and environmental improvement”.

However, the concept of Cadastre is difficult to identify. It may be designed in many different ways, depending on the origin, history and cultural development of the region or country. Basically, a cadastre as such is just a record that identifies the individual land parcels/properties. The purpose of this identification may be taxation (as was the reason for establishing the European cadastres) or it may be security of land rights (as was the case when establishing the cadastre in Australia and some Canadian provinces). Today, most cadastral registers around the world are linked to both the land value/taxation area and the area of securing legal rights in land.

Therefore, it makes sense to talk about cadastral systems or property rights infrastructures rather than just Cadastre. These infrastructures include the interaction between the identification of land parcels, the registration of land rights, the valuation and taxation of land and property, and the control of present and possible future use of land.

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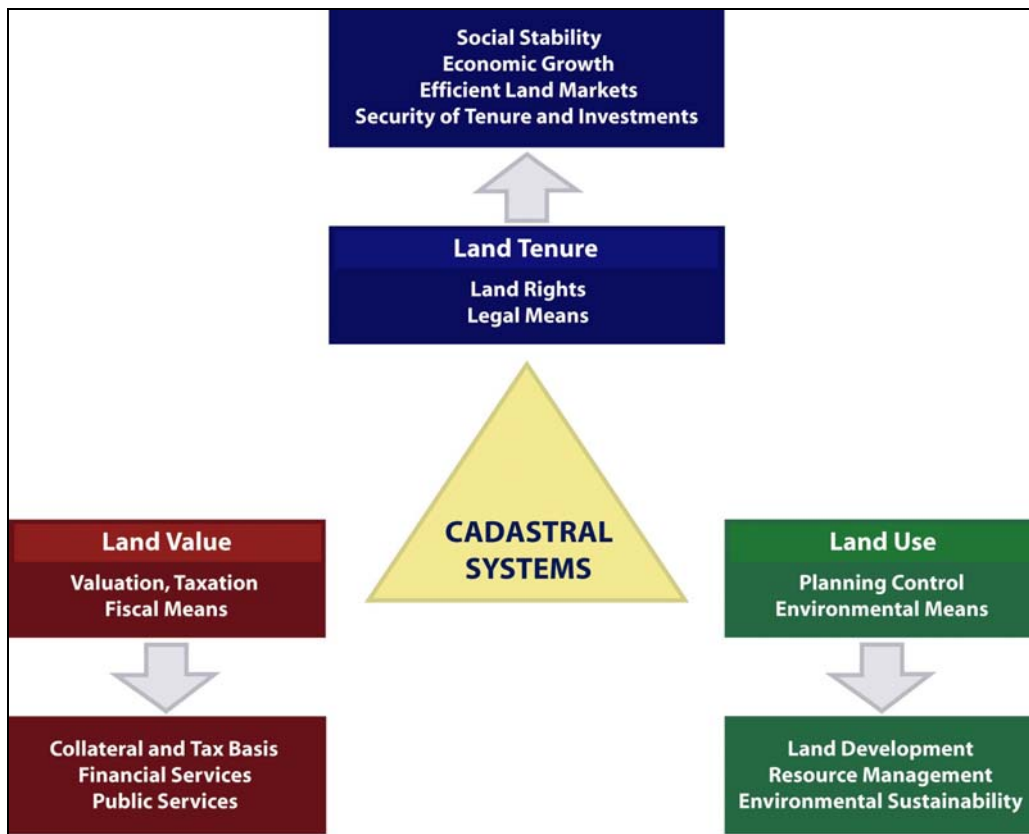


Fig. 1 Cadastral systems provide a basic land information infrastructure for running the interrelated systems within the areas of Land Tenure, Land Value, and Land Use (Enemark, 2004).

Under the definition of the word «infrastructure» in the dictionary, we will find these ones: «the large-scale public systems, services, and facilities of a country or region that are necessary for economic activity⁴» or « a substructure or underlying foundation; the basic installations and facilities on which the continuance and growth of a community, state, etc. depend»⁵. These two definitions fit very well with a property rights infrastructure. A register in which the rights and constraints affecting a territory are registered is necessary for economic activity, namely by supporting the land market and contributing to the growth of the state and the country. In effect, how can we do any action on any part of the territory or initiate any project on it if we don't know who owns what and where?

A land rights infrastructure has a very broad usefulness in the society, and can be divided into four missions, showed in Fig 2 :

- Property rights mission
- Economic mission
- Taxation mission
- Environmental mission

⁴ Encarta Dictionary

⁵ Webster's New World College Dictionary, 4th Ed.

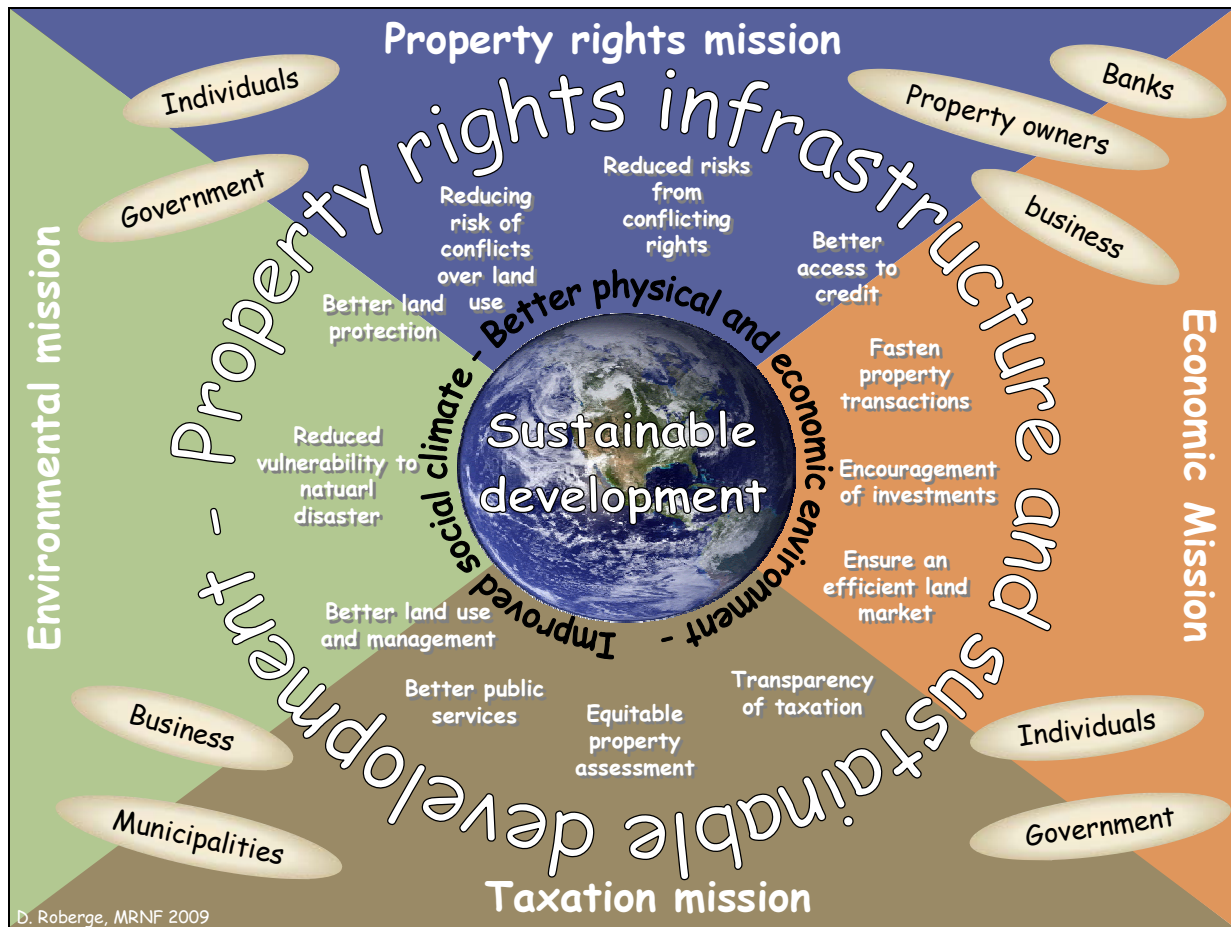


Fig. 2 Property rights infrastructure and sustainable development (Roberge, 2009)

1.1 Property rights mission

Property rights are human rights and are recognised as a key factor to alleviate poverty. This principle is endorsed by many international organizations like the World Bank, FAO, UN-Habitat and the International Federation of Surveyors (FIG).

Klaus Deininger, lead economist at the World Bank states that: «Land rights are social conventions that regulate the distribution of the benefits that accrue from specific uses of a certain piece of land.» Property rights infrastructure should be provided by a public authority: «A number of arguments support public provision of such rights. First, the high fixed cost of the institutional infrastructure needed to establish and maintain land rights favors public provision, or at least regulation. Second, the benefits of being able to exchange land rights will be realized only in cases where such rights are standardized and can be easily and independently verified. Finally, without central provision, households and entrepreneurs will be forced to spend resources to defend their claims to property, for example through guards, fences, etc. which is not only socially wasteful but also disproportionately disadvantages the poor, who will be the least able to afford such expenditures.» (Deininger, 2004)

The Commission on Legal Empowerment of the Poor, co-chaired by Madeleine Albright and Hernando de Soto stated in their final report issued in 2008 that property rights give access to capital and are one of the four pillars which can contribute to alleviate poverty (UNDP, 2008).

Normally a property rights infrastructure consists of two main elements: a cadastre in which the object of land rights (the land parcel) is designated by a unique name or number, and a land register in which each right is registered and publicised under the parcel number. Such public infrastructure is fundamental to avoid land rights disputes and land use conflicts, contributing to a good social climate.

«As land experts and guardians of land rights, we are what could be called « peace keepers by anticipation». In fact, our intervention regarding land rights and land tenure issues may avoid further land conflicts. We must remember that, most of the time, war between nations or conflict between two neighbours finds its source in the right to a piece of land.» (Roberge, 2005)

A good property rights infrastructure contributes to the protection of rights for the owner and also for the creditor, contributing to a better access to credit. In effect, the more the mortgage of the lender is well protected the cheaper is the credit rate. Such a public and transparent property rights registration system also contributes to accelerate and simplify land transactions, saving time and money to every stakeholder.

1.2 Economic mission

«Property rights infrastructure is essential to any market economy. To trade, it is essential to know that the person selling a good or service owns it and that ownership will pass to the buyer. The stronger and clearer property rights are, the more likely it is that trade will take place and that prices will be efficient.»⁶

In fact, most of the economic activity (real estate, construction, mining, oil and gas, forestry industries and most of industrial activity) is linked to a right on a piece of land. When the land rights registration system is reliable and efficient, it encourages investment, contributes to fasten real estate transactions and ensures a well functioning land market.

In most developed economies, including also the US economy, a very large part of the economy is directly tied to real estate and property rights (mainly ownership and mortgages). If markets shall work well they must, among other things, be transparent and easy to access, especially for new market players. The easier access to relevant information the lower transaction costs. Most European jurisdictions have established property information services that accomplish this. By comparing the amount of information that is available concerning companies listed on the New York Stock Exchange with the information on individual

6 Source: www.Economist.com, Economics A-Z Section, adapted from "Essential Economics", by Matthew Bishop and published by Profile Books.

properties in the US it is easy to see that a Property Rights Infrastructure would make a real difference.

1.3 Fiscal mission

In Europe, the cadastre, the basis of a land rights infrastructure, was implemented for a taxation purpose. «The word “cadastre” is derived from the medieval Greek term “katastichon”. In the Latin, the term gradually evolved to “captastrum” or register of territorial taxation units into which Roman provinces were divided.» (McLaughlin, J. D. and Clapp, J. L., 1978)

When the modern cadastre was established by Napoleon I in 1807, the main focus was on land-based taxation to ensure stable revenues for the State. Even if nowadays a property rights infrastructure has a broader utility, this fiscal role is still essential for the functioning of the society. It gives the government, usually at a local level, the possibility to establish a fair and transparent taxation system based on the value of each property. The income generated by such a system provides the local administration capacity to offer and manage good public services (water supply, sewage, garbage, roads, etc.).

«A fiscal cadastral record not only provides the basis for the valuation of the land by including information about parcel size, shape, location, tenure rights, and restrictions, but also provides means of ensuring complete and equitable assessment of the improvement of the land.» (McLaughlin, J. D. and Clapp, J. L., 1978)

1.4 Environmental mission

A property rights infrastructure can also play a major role in many environmental aspects.

«Private property rights are often more economically efficient than common ownership. When people do not own something directly, they may have little incentive to look after it.»⁷. This principle can also be applied to environmental issues. The owner of a land parcel will take care of it. At the opposite, the nomad takes all he can from a parcel and then moves, contributing to desertification.

The report titled *Global Environment Outlook GEO4* published by UNEP in 2007 also states that individual property rights contribute to a better environment:

«The communal land tenure system, in which property is collectively owned, is often cited as the reason for overexploitation of land, contributing to land degradation and deforestation. [...] Poor land tenure regimes that precipitate ineffective land-use planning and management can only lead to overexploitation of the resource, contributing to increased land degradation, salinization, pollution, soil.» (UNEP, 2007)

⁷ Source: www.Economist.com, Economics A-Z Section, adapted from "Essential Economics", by Matthew Bishop and published by Profile Books.

The final report of the Commission on Legal Empowerment for the poor also highlights the relation between property rights and the protection of the environment:

«Securing land and resource rights for the poor can combat poverty as well as environmental degradation. The poor depend more directly on their local environment for their day-to-day survival than the rich. They bear the immediate brunt when ecological resources and services collapse. Yet evidence from around the world shows that reversing environmental damage such as over-fishing, water pollution, land degradation, and deforestation is closely associated with ensuring that local people and communities have ownership or stewardship over the environmental resources they depend on.» (UNDP, 2008, p.39)

For the Commission, a good land rights infrastructure may also mitigate the impact of a natural disaster namely on property rights:

«When disaster strikes, disputes about land and other property rights are particularly contentious and difficult, not least when people are displaced. The destruction, or lack, of a valid, recognised system of property titles can lead to conflict and halt recovery and reconstruction in their tracks.» (UNDP, 2008, p.39)

When Hurricane Katrina struck the Mexico Gulf Coast, critical parcel information that was urgently needed by emergency responders, public officials, and insurance companies was not readily available and, in many cases, was nonexistent.(National Research Council, 2007)



Hurricane Katrina in Venice, Louisiana in 2005, United States Geological Survey

A good property rights infrastructure in Louisiana should probably have mitigated some of the impacts and speeded the reconstruction after the Katrina hurricane in 2005.

Such property rights infrastructures facilitate a better land management, contributing to sustainable development.

2. THE CADASTRAL AND PROPERTY RIGHTS REGISTRATION SYSTEM IN THE USA

Based on *National Land Parcel Data, a vision for the future* (National Research Council, 2007), a report chaired by Dr David Cowen and referring to a previous report *Need for a Multipurpose Cadastre* (National Research Council, 1980) the status of land parcel databases in the United States can be described as follows:

- A nationally consistent set of parcel data does not exist in the United States.
- One third of the counties in the United States have embraced digital parcel data as the core of their state-of-the-art information systems;
- While about 70 percent of the tax parcels in the United States now exist in digital form, the remaining 30 percent are located in the roughly 2,000 most rural counties.
- Commercial firms in the United States are capitalizing on the public's interest in parcel data. For example, it is estimated that more than 2 million people a month access Zillow.com to anonymously obtain detailed property values and characteristics for more than 70 million properties. Many other private companies in the utility, insurance, or location-based services industries also maintain their own parcel databases.
- Federal agencies are acknowledging their need for parcel data to fulfill their missions
- Issues related to the accuracy and currency of the data still must be addressed.
- Appropriate funding mechanisms for a national land parcel data set are needed.
- The financial and technical issues are minor compared to the organizational and political ones.
- There is no single inventory of federal lands.
- The lack of nationally integrated land parcel data has led to massive duplication of effort among various levels of government and between the public and private sectors. For example, in the absence of a coordinated public sector approach to parcel data, private firms have acquired local data and teamed with aerial photography companies and commercial digital map providers to develop their own versions of parcel data.
- There are many issues related to what data should be in the public domain and what should be considered confidential to protect privacy.
- Local governments are suspicious that development of a national land parcel data set may become another “unfunded mandate,” under which they are required to provide their data for little or no compensation or benefit to them.

This short description can be completed by the following elements from an article written by Harlan J. Onsrud and titled *The Land Tenure System of the United States* presented at the BDVI Forum in 1989 (Onsrud, 1989).

- The “due process” clause of the US Constitution and other enumerated rights within the amendments to the constitution give individual citizens significant protection from intrusion by the government and have been cited as substantial constraints in converting to a land registration system;
- Private title insurance industry owes its reason for existence to the inefficiencies and non conclusiveness of the current records systems
- For these and other reasons, a land registration system modeled after those seen in Europe would not be acceptable within the current US social, legal and institutional environment.

The environment in the US – and globally – is very different today. As President Obama has said, there is a need for “remaking”, a time to reassess and to change. There is maybe a real possibility today to create a Property Rights Infrastructure modeled after those existing in other countries.

3. WHAT HAVE AMERICANS PAID (AND MAYBE THE REST OF THE WORLD) FOR NOT HAVING A PUBLIC PROPERTY RIGHTS INFRASTRUCTURE?

In 2002, during the FIG Congress in Washington, Mr Bengt Kjellson made a presentation entitled: *What do Americans pay for not having a public Land rights information system?* At this time, Mr Kjellson estimated these costs at 20 billions \$ annually. He presented several reasons for this substantial difference between Europe and the US, but the most fundamental was the lack of information and the subsequent difference in transaction costs, in risk assessment and in competition.

In the new context of the mortgage crisis in the USA and the economic crisis it has triggered worldwide, we can reformulate the question «What have Americans paid (and maybe the rest of the world) for not having a public property rights infrastructure?» In effect, a good land registration system could have mitigated the effect of the land market crisis and could have avoided the lost of many hundreds or even thousands of billion dollars.

In its latest calculations the IMF reckons that worldwide losses on debt originated in America (primarily related to mortgages) will reach \$ 1 400 billion. The IMF’s «base case» is that American and European banks will shed some \$10 000 billion of assets in 2009.

Based on these data it is fair to say that if a property rights infrastructure had been in place in the USA, maybe the mortgage crisis would have been of less intensity. It is also the opinion of Dr David Cowen who chaired a committee on land parcel databases and said «If the Federal government had paid attention to the recommendations of the 1980 National Research Council report titled «Need for a multipurpose cadastre», we would have had an early warning system that could have prevented the subprime mortgage crisis and saved Bear Stearns».

4. WHAT SHOULD BE DONE TO REBUILD THE US LAND MARKET ON A MORE SUSTAINABLE BASIS?

There are actually two proposals coming from IT/GIS industries to participate to the *Plan to Revitalize Economy and Protect American Families* of the new US President Barack Obama (Obama, B., 2009). One proposal is coming from ESRI⁸, the other coming from Autodesk, Microsoft, ORACLE, Google and Intergraph⁹. Both proposals are based on the National Data Parcel project prepared by the National Research Council *National Land Parcel Data: A Vision for the Future*, in which the cost to have a parcel coverage is evaluated to \$200 million. This vision can be briefly described as follows:

- Distributed system of land parcel data housed with the appropriate data stewards;
- Accessible through a central web-based interface
- A minimum set of attributes
- The development and integration of the national data set would be overseen by a national coordinator
- These data would serve as the cadastral data layer of the NSDI.
- This vision is based on existing federal policies for national geospatial data and thus the data would be in the public domain, but in order to address issues relating to privacy and confidentiality, no information will be provided about private ownership, use, or value.
- This national system would be built on already existing parcel data systems at the state and local levels.
- The envisioned system would link a series of distributed servers maintained by local and state governments.
- The system could seamlessly assemble accurate and timely parcel information for any part of the nation.

The vision is aiming to establish a nationwide land parcel database or a cadastral database as it is named in most countries throughout the world. This will be a huge achievement compared to current situation in USA where often analogue index maps are mainly hold at the deeds office at county level. Such a database will include data for the total of about 150 million parcels across the country.

This project does not include the need for improving the legal basis. However, the improvement of the registration of property rights would be important to rebuild the land market on more sustainable basis. The National Land Parcel Data project therefore does not fully support property rights infrastructure solution as described in section 1 above.

Such a system may be based on general boundaries (as in the UK) or metes and bounds descriptions (as in most states in the US), or it may be based on legal boundary surveys as is

⁸ http://www.gis.com/gisnation/pdfs/national_economic_recovery.pdf

⁹ <http://www.cast.uark.edu/nsdi/nsdiplan.pdf>

the case in many in most Torrens systems such as in Australia and most Western Canadian states or on a cadastre, like in many European countries and also in the Canadian province of Quebec.

The current financial crisis has led to initiatives for establishing a National Land Parcel Data Base with a special focus on identifying the individual properties in support of the mortgage market. This should lead to the opportunity of monitoring the real estate related transactions at the parcel level in “real time” and thereby serve as an early warning system

A reliable land rights infrastructure that would support the registration of rights based on surveyed boundaries would cost many billion dollars. The great advantage of surveyed boundaries is of course the security in identification of the individual properties. But increasingly accurate boundaries are needed to establish integrated land information systems that enable combination of the property layer with large scale topographic maps and all kind of information on land rights, utilities and natural resources. The point is that the costs of establishing such an infrastructure can be recovered with user’s fees. In effect, it is probably one of the only infrastructures for which it is possible to establish user fees to pay back the investment. For each right published in the official land register a user fee (let’s say USD 40 or 50) can be charged. So, even if a property rights infrastructure based on surveyed boundaries is more costly to establish than the technological solution for providing a land parcel layer, the cost can be recovered.

Even if those involved in conveyancing or lending – land owners, realtors, lawyers, lenders, etc – were to pay such fees their work would be made considerably more efficient. A Property Rights Infrastructure as described above would inevitably create a more innovative business climate with new products and improved competition, something that is of great benefit to consumers. The property market would change, and change for the better!

One of the main obstacles to the implementation of a land rights infrastructure in the USA is probably the title insurance companies. In the context of the mortgage crisis, it is obvious that the land title insurance companies cannot replace a public property rights infrastructure and they did not protect neither the land owners nor the land and financial markets.

It is time to improve the protection of rights of the US citizens instead of continuing to invest in risk management. If the Americans, rather than paying \$ 20 billion annually as estimated by Mr Kjellson in 2002, invest a part of this amount in the development and the implementation of a national property rights infrastructure, they would contribute to restart the land market on solid basis and to the benefit of the country and its citizens.

As said by Dr Cowen in the recent report: «US Government has funded numerous foreign cadastres, an investment that far exceeds the cost to do so here at home» (Palatiello, J., 2008). These projects have been essential in the establishment of democracy and free markets in countries that have been subject to one-party regimes, central planning and a lack of individual property rights. These efforts have, especially in the former Eastern Europe,

liberated resources of different kinds and created economic development. In most of these countries the cadastres and land registers have been given the kind of legal status where the information is backed by a state guarantee. Such a guarantee ensures users that the information is reliable and up-to-date, and that there is minimal need for other insurance schemes. For the government, this trust from the user community means that the possibility to finance reforms and maintenance of the infrastructure can be financed by fees. At the same time, the guarantee does not cost much for the national governments as it is, in most countries, quite rare that faults appear which lead to losses and compensation

Why not implement a public property rights infrastructure in each state? Maybe the initial investment looks like a barrier but it is possible to make a cost/benefit analysis that can prove its profitability and sustainability on a long term period.

And this fits with the will of the Federal government who wants to invest in infrastructures to restart the economy. This property rights infrastructure could be managed at a state level using national specifications and based on new legal basis.

In his inauguration speech, President Barack Obama said «Starting today, we must pick ourselves up, dust ourselves off, and begin again the work of remaking America.»¹⁰. So, why not remake America and its land market on more sustainable basis?

Implementing a property rights infrastructure across the USA is a big challenge, but as said President Obama:

«Today I say to you that the challenges we face are real. They are serious and they are many. They will not be met easily or in a short span of time. But know this, America — they will be met.»

«For everywhere we look, there is work to be done. The state of the economy calls for action, bold and swift, and we will act — not only to create new jobs, but to lay a new foundation for growth.»

¹⁰ Inauguration speech of President Barack Obama on January 20th 2009. Source CBC News : <http://www.cbc.ca/world/story/2009/01/20/obama-speech-text.html>

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BIOGRAPHICAL NOTES

Daniel Roberge is currently director of the Office of the Surveyor General of Québec. He has been involved in the design, the development and the implementation of two of the most extensive land reforms ever undertaken in North America: the reform of the Quebec cadastre, which covers all privately-owned land in Quebec, and the modernization of the system to record rights on public land. Mr Roberge is member of the board of the Champlain Branch of Canadian Institute of Geomatics. He also participated to the foundation of the Fédération des géomètres francophones. He is the FIG Commission 7 chair elect for 2009-2010.

Bengt Kjellson is head of the Land Registration Division within Lantmäteriet, Sweden's national Mapping, Cadastre and Land Registration Authority. He has considerable experience from various land administration projects in different parts of the world. He was chair of UN ECE Working Party on Land Administration between 2001 and 2005, and is currently chair of EuroGeographics' Cadastre and Land Registry network

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