Incorporating Environmental Perspectives in Real Estate Valuation Practice: Challenges & Recommendations

Makena Kaaria-OGETO, Kenya

Key words: environmental stewardship, valuation practice, environmental information

SUMMARY

The world has awakened to the effects of poor environmental management practices which are manifested in the Kenyan context in destruction of water towers and wetlands; water pollution; land degradation and atmospheric pollution. Given that environmental consequences need a multi-disciplinary approach to stewardship, a study was undertaken to assess the contribution of Valuation and Property Surveyors. This paper posits that Valuation Surveyors in Kenya are moderately aware of the importance of incorporating environmental perspectives during property reporting but this is hindered in practice primarily by the lack of environmental information and the costs of environmental investigation among other reasons.

Non-consideration of environmental aspects in property valuation is results in property owners being exposed to the risk of declining property values, litigation for non compliance of environmental regulations, continued contamination of land and declining land quality. The collective actions of public and private land holders eventually result in food insecurity and increased poverty. This paper is based on the findings of a study conducted on the Attitudes of Valuation and Property Management Surveyors in Nairobi, Kenya to their role in Environmental Stewardship.
Incorporating Environmental Perspectives in Real Estate Valuation Practice: Challenges & Recommendations

Makena Kaaria-OGETO, Kenya

1. INTRODUCTION

Environmental stewardship is the responsibility for environmental quality shared by all those whose actions affect the environment (United States Environmental Protection Agency, 2008). Environmental stewardship imposes a responsibility on every person to participate in protection of the environment. Berry R. J. (2006) notes that stewardship is about caring and results from a relationship between the carer and the object under care. The same can be argued for the environment as the source of valuable resources. Surveyors are obliged to use their skills to care for the environment and one way to do so is by providing environmental advise to clients in the course of their professional practice. Everyday choices and decisions impact the environment and by being active stewards professionals can reduce the impacts and therefore play a role in sustainable development.

Globally, countries are playing their role in environmental stewardship by implementing agreements such as the Kyoto Protocol and the Copenhagen Accord, to show commitment to reduce atmospheric emissions and energy consumption. Individual governments have also passed legislation and policies which invoke heavy penalties for non compliance in order to guide management of the environment and to safeguard resources for future generations. Environmental stewardship by individuals has been encouraged through concepts such as carbon footprints.

Research conducted on the role of urban built environment professionals (surveyors, engineers, architects and planners) in sub-Saharan Africa in implementing the goal of sustainable human settlements found that the professionals had little knowledge of their roles despite environmental issues being in the forefront of all aspects of development in the last two decades.

2. SIGNIFICANCE OF ENVIRONMENTAL STEWARDSHIP IN KENYA

It estimated that Kenya’s population is growing at 4% per annum, a factor that makes environmental aspects increasingly important as they relate to the governments poverty reduction & food security goals; and Vision 2030 which is the governments blue print to indistrialisation by year 2030.

In the past few years, the construction industry in Kenya has experienced a high growth rate fuelled by economic optimism both domestically and by foreign investors after the change of government in year 2002. According to the Kenya National Bureau of Statistics (KNBS), the total value of reported private building works completed in selected major towns increased significantly from Kenya Shillings (KShs.) 2 billion in year 2006 to KShs. 12.3 billion in year...
2008. The increase in construction activity is also reflected in the increased consumption of cement by 16.7% in year 2008 (Economic Survey, 2009).

The rapid increase in the value of building plans approved by the Nairobi City Council (NCC) and the increase in the value of reported completed private building works in Nairobi are shown in the figures below.

Figure 1.1: Value of Building Plans Approved by the Nairobi City Council (2003 – 2008)

![Figure 1.1: Value of Building Plans Approved by the Nairobi City Council (2003 – 2008)](image)


Figure 1.2: Value of Reported Completed Private Building Works in Nairobi (2003 – 2008)

![Figure 1.2: Value of Reported Completed Private Building Works in Nairobi (2003 – 2008)](image)


With the growth in the real estate and construction industry, environmental issues in real estate have become more pronounced. Five large shopping malls have opened in Nairobi since year 2004 bringing to light the need for efficient use of energy, water management and waste management procedures by Property Management surveyors. In addition, clients of Valuation Surveyors are becoming increasingly environmentally aware and some clients require environmental considerations incorporated into their valuation reports. Mortgage providers and banks now require an Environmental Impact Assessment prior to releasing finance for property development.
3. ENVIRONMENTAL PERSPECTIVES REQUIRING ATTENTION DURING PROPERTY REPORTING

Environmental issues in real estate include inefficient use of energy, air quality management, water management, management of the internal and external microclimates, waste management and recycling, the environmental impact of building materials, environmental impact of land use, contamination, flooding, soil erosion and land slides, and promotion of health and safety. All these issues need to be considered when Surveyors are offering real estate consultancy advice. Rydin (1996) notes that property professionals need to commit to integrate environmental concerns with operational, financial, safety, health, economic development and other relevant concerns in decision-making. Also in order to meet and comply with local and international standards for sustainable environmental management.

Levels of poverty/prosperity, economic development, severity of contamination and degradation, and the roles of governments all differentiate the environmental agenda in different regions of the globe (ibid.). In the Kenyan context, the environmental aspects of the urban built environment can be outlined as follows:

3.1 Inefficient Energy Use

Excessive use of energy is related to current global environment concepts such as the ‘greenhouse’ effect, global warming and climate change. In cities, green house gases are generated during construction and occupation of buildings and during the chemical processes used for the manufacture of materials and products. Energy management during property design and management aims to reduce the emission of greenhouse gases into the atmosphere by incorporating into building design systems which ensure energy efficiency. Energy efficiency in buildings can be increased by incorporating facilities such as automated lighting facilities, low energy lighting equipment and by maximum utilization of natural day-lighting.

The research found that 44% of the study respondents made consideration of inefficient use of energy in buildings during property reporting. Energy efficiency issues considered included use of low energy consumption techniques such as natural ventilation, maximum use of day lighting, low energy lighting incorporated into building design and use of automated lighting. The nature of aspects considered be attributed to the fact that Nairobi lies close to the equator and therefore due to the tropical climate buildings and there is little need for artificial heating and lighting in buildings save for where building design makes it necessary. In addition, there are no existing standards against which energy efficiency rating can be performed.

3.2 Water Management

In Kenya waste water disposal is usually onto surface water or on land resulting in pollution of surface and ground water supplies. Where industries discharge their untreated water into municipal sewers, the result is damage to the sewer system often leading to collapse and to interference with municipal treatment systems. According to the Sustainable Cities
Programme, the leading pollutants are suspended matter, toxic wastes and biological pollutants. Fertilizers and detergents also have increasing importance as people bathe, wash and farm upstream. Urban built environment professionals ought to implement recycling of grey water for landscape irrigation and use WC’s in professionally managed properties.

The study found that 38% of the respondents made consideration of the efficient use of water and its water management on a property. The water management issues considered included the presence of grey water recycling facilities on the property, additional non essential use of water such as fountains, water features, and landscape irrigation. Most Valuers indicated that they routinely indicated the source of water (mains water supply or borehole) and its application.

From a Focus Group discussion, it was noted that water is seen as a limitless resource in abundant supply and as Nairobi is an urban centre water supply from the City Council supply is guarantee. Where water supply from the City Council is not available, property developers are permitted to sink boreholes for extraction of ground water once they have complied with the provisions of the Water Act and Rules relating to ground water. As a result of this, Surveyors not see the necessity to make comments on its use and management of water unless there is a water shortage or problems with supply of water to a property.

3.3 Waste Management

In Nairobi, municipal waste collection and disposal services are inadequate leading a majority of private businesses and residential estates to contract private garbage collection firms at a monthly fee. According to Muchane E & Muchane G (2006), Nairobi City Concil (N.C.C) and private garbage collection companies collect 800 – 1000 tonnes of solid waste daily leaving 700 – 800 tonnes uncollected. Of these only 8% comprising mainly of paper, glass, metal, rubber and plastics is recycled. Solid wastes obstruct storm water drainages resulting in flooding. They also threaten the quality of ground water through seepage of contaminants.

Vast quantities of natural resources are used in construction of buildings, roads and infrastructure, and their eventual demolition or redevelopment can produce waste which can be recycled on other projects. Unfortunately, the fragmented nature of construction development means that the practical extent of recycling is constrained. Resource sustainability can be protected for instance by replenishing tropical timber used for construction through re-forestation and by recycling for instance of scaffolding and parquet floors.

The study found that a majority of Valuation Surveyors (57%) detail any procedures for solid waste disposal carried out on a property and their impact on the environment. They also report recycling measures at a property. At the Focus Group discussion, this was assessed to be a positive result of the introduction of stringent anti-littering regulations and promotion of efficient waste management practices for households and firms by the Nairobi City Council (NCC). It was noted that the visual campaign by NCC which included tree planting and beautification of city streets laid emphasis on waste management and greening of the city.
3.4 Pollution

The main categories of pollution affecting the urban built environment are atmospheric pollution, water pollution and noise pollution. Air pollution in cities is caused by vehicle emissions, dust from unpaved roads, poorly planned land use patterns, fuel combustion, atmospheric conditions and industrialization. The quality of air needs to be managed to ensure that an environmentally safe level of air pollutants is maintained to protect human health and the environment. Atmospheric pollution in real estate results from dust created during demolition of buildings, from vehicles, burning of wastes and solvent releases from paint, strippers, degreasers etc.

Water pollution results from spillage or silt run off as a result of excavation work. Noise pollution results from vibration during construction activity such as excavation and demolition as well as from motorised construction equipment.

The study found that half of the respondents reported on the atmospheric conditions at a property including quality, dust generation, noise and vibration and their effect on property value. It was noted that the most common sources of atmospheric pollution were release of gaseous emissions into the environment by industrial plants and vehicular traffic.

3.5 Greening of the External and Internal Environment

Greening buildings involves increasing the use of natural vegetation within building design. Greening is categorised into external landscaping and gardens, internal greening of walls and roofs and internal planting (Facer J and Kendall C., 2008:24). Greening benefits property occupants by improving the living environment and improving the local microclimate. Greening also results in reduced energy costs by creating a cooling effect around buildings reducing the need for air conditioning.

Many built environment professionals and investors do not understand the potential benefits of greening and therefore see no reason to encourage or incur the extra costs of greening (ibid). In addition it is difficult to quantify the environmental and social benefits of greening. Further, greening may not be practical due to allergic reactions by the occupiers or due to lack of space in congested buildings and sites.

The study found that there was a low level of awareness among valuation surveyors regarding the environmental impacts of greening the internal environment such as reduced concentration of carbon dioxide and noise absorption by careful selection of internal finishes as only 28% made consideration of the internal building environment during property reporting.

The low level of awareness among the respondents of the benefits of greening the internal environment could be attributed to the tropical climate which allows natural lighting and ventilation all year round therefore reducing the necessity to regulate carbon dioxide concentrations and humidity through greening. It was however noted that greening the...
internal environment would be beneficial to increase acoustic absorption where floors are finished in materials with low noise absorbency such as marble, granite and tiles.

46% of the study respondents made consideration of the external building environment aspects such as reduction of impact through landscaping; low maintenance landscaping for water conservation; and consideration of health and safety hazards such as the presence of high voltage electricity supply apparatus in the neighbourhood.

While many buildings in Nairobi have landscaped grounds, this is related more to aesthetics than to the environmental benefit of greening. Therefore advantages of external greening such as reduced concentration of carbon dioxide, noise absorption and elimination of urban heat islands may not be incorporated into property reports but the aesthetic aspect would be.

3.6 Environmental Impacts of Land Use

Increasing population has resulted in increased demand for land for housing and infrastructure. This has put ecologically sensitive sites at risk as there is now demand for them to be put into economic use. In Kenya, inconsistent land use planning implementation has resulted in incompatible land uses such as development of residential buildings in industrial zones, location of high voltage electrical apparatus and mobile telephone masts in residential areas.

56% of respondents made considerations of incompatible land uses, development on ecologically sensitive sites; development of buildings on contaminated sites; incompatible land uses and the presence of potentially unsafe installations such as high voltage electricity line or mobile telephone masts.

3.7 Contamination

According to Dixon T and Richards T. (1996), contamination is caused by the mere presence of a foreign substance, whereas pollution results when such a substance causes harm. Contamination however does not necessarily render land unusable as it can be managed and sites decontaminated. In property, contamination usually results from hazardous materials left behind in re-development sites.

Contamination of land is problematic because it presents risks to the health of living organisms and also creates financial difficulties and uncertainty for businesses. Other than remedial costs there is also stigma related to contaminated land due to the possibility of hidden clean up costs, the fear of public liability and the potential lack of mortgage-ability (Dixon and Richards, 1996). Campanella (2002) notes the chilling effect of contamination results in loss in value because of past negative publicity, the reduction of local commercial activity, the prospect of future negative impacts due to additional contamination and inconvenience.
46% of the respondents reported the presence of contamination on a property including leaking underground storage tanks and use of asbestos in construction. This suggests that the respondents have a moderate awareness of the environmental effects of contamination. At the Focus Group discussion, it emerged that contamination is not yet a major issue as only a small number of brownfield sites have been re-developed especially in the main Nairobi industrial area. Substantial re-development work has been conducted in residential areas where contamination is unlikely.

3.8 Environment Impact of Building Materials

The most common building materials in Kenya are concrete blocks, masonry and glass. Concrete is a main component of construction but its production requires high energy and water use. Masonry requires excavation from sites that are usually subsequently left unfilled and consequently pose a safety hazard to local residents. Many materials can be pre-sold for recycling at the end of their life span and a fairly large market is growing in recycling stripped out materials. The use of locally available building materials reduces carbon emissions by reducing the necessity for transportation.

43% of the respondents said they routinely considered the type of building materials used in construction of the property under assessment and its impact on the environment. Some respondents indicated that they noted locally sourced building materials.

3.9 General environmental awareness

61% of the study respondents indicated they made some form of consideration of environmental issues in property in their reports such as issues relating to a property such as potential landslides, flood-prone areas, presence of solid waste dumps and unlawful discharge into rivers or sewers. However, 23% of the respondents indicated they did not make any environmental considerations at all during property reporting. Majority of the respondents who did not incorporate any environmental considerations during property reporting were employees of government institutions who produced reports based on a standard official format which does not provide for incorporation of environmental issues in real estate.

4. CHALLENGES OF INCORPORATING ENVIRONMENTAL PERSPECTIVES IN VALUATION PRACTICE

Little research has been conducted in environmental issues in real estate in Kenya and how Surveyors are involved in environmental Stewardship. Matters to do with the conservation and management of the urban built environment are seen as the domain of international organisations such as UN Habitat and surveyor’s professional bodies such as Commonwealth Association of Surveying and Land Economy (C.A.S.L.E), International Federation of Surveyors (F.I.G), Royal Institution of Chartered Surveyors (R.I.C.S) and Institution of Surveyors of Kenya (I.S.K).
The roles of individual Surveyors and how they contribute to environmental stewardship through professional practice is unclear. From the study the key challenges hindering Valuation surveyors from incorporating environmental perspectives in their work were assessed to be as follows:

4.1 Lack of Background Knowledge and Skills

Surveyors often do not have the necessary skills to assess environmental conditions on the ground and give informed advice. According to Parsa (1996), despite the rapid expansion of academic and industry led research into the interaction between environmental issues and the property development industry, there has been little input into property related courses (across the United Kingdom). Educators and professional organisations such as the RICS play an important role in shaping the education requirements of the surveying profession through course validation and professional development programmes (ibid.)

With the increasing sophistication of environmental issues and their impact on the property industry, the property profession faces serious capacity challenges when dealing with such developments both professionally and intellectually. It is important that professionals are equipped with academic knowledge of environmental issues to prepare them for national and international challenges to professional practice.

According to Dixon T. and Richards T. (1996), one of the main problems is that Valuers do not have the professional indemnity insurance cover to enable them take on the environmental risks attached to properties and sites. This is compounded by uncertainty as to which valuation methods to apply in the valuation of contaminated land and how these methods should be adapted for use in often unique circumstances.

An assessment of coursework at the University of Nairobi showed that a Bachelor of Arts Degree in Land Economics or equivalent degree is a primary requirement for one to be engage in Valuation or Property Management practice in Kenya. At present majority of the registered Environmental Experts have an academic background in Land Use Planning. The University of Nairobi’s School of Built Environment, offers undergraduate courses incorporating environmental issues in real estate include courses in Physical Environment; Environmental Building Services and Urban and Regional Planning. The School of Built Environment also provides postgraduate courses including a Master of Arts Degree in Valuation and Property Management or a Master of Science Degree in Construction Management. According to the Regulations for the Master of Arts Degree in Valuation and Property Management, the postgraduate courses incorporating environmental issues in real estate include courses in Valuations of Natural Resources and Environmental Impact Assessment

4.2 Environmental Concerns in Real Estate from Literature Review Differing from Actual Concerns in Local Context
Theoretical concerns in real estate provided for explicit roles for property practitioners while on the ground many of these concerns relate to lack of service provision or delivery by the central or local government. For instance, environmental concerns in real estate in Nairobi include: surface water pollution from discharge of sewerage and untreated industrial effluents; air pollution; inadequate sanitation; poor solid waste management; degradation of land; congestion and overcrowding in slum settlements; occupation of hazard-prone areas; loss of open spaces to land development; and depletion of water and forest resources. Most of these concerns require intervention from the municipal authority and central government.

In this context, it is difficult for a Surveyor engaged in private practice to perceive how he can contribute to environmental stewardship. This view was reflected during data collection with some respondents noting that the low level of significance given to environmental issues results from the presence of more urgent socio-economic matters that professionals have to deal with.

4.3 Unavailability of Environmental Information

The dissemination and sharing of relevant information to built environment professionals remains a key issue. While professional organisations perform a key role in disseminating information to their members, many are constrained by a lack of resources. Much work is undertaken within the academic community that could assist the development of built environment professionals but is not disseminated to the professional audience or sufficiently re-interpreted as practical tools and advice for professional use (Seaton, 2003).

Lack of environmental information may lead to frustration and influence the attitude of professionals to incorporating environmental advise. Ill-informed advise to clients on environmental issues in property would be detrimental to the industry as it would result in declining property values and increased property voids. Non consideration of environmental issues in property may also result in planning permission being denied for development work, health and safety issues on contaminated sites, high maintenance costs relating to energy consumption, wasteful use of water and ineffective waste management practices.

82% of the respondents indicated that they had no access to academic reports on environmental issues in real estate conducted by local educational institutions. 98% of the respondents agreed that coursework for the Bachelor of Arts in Land Economics degree should contain a course on environmental issues in real estate. 85% of the respondents felt that professional societies did not adequately raise awareness within the profession regarding environmental issues in real estate and their consideration during property reporting.

4.4 Cost of Environmental Investigation

Clients may not be willing to pay for the cost of environmental investigation as an additional service to traditional valuation duties. However it may well be that environmentally aware clients would consider meeting the additional cost as Rydin (1996) concurs, this would depend on the individual characteristics of the client. Large clients may be willing and able to
bear the costs and may be motivated by the fact that they are more vulnerable to adverse publicity. Smaller clients may prefer to adopt a short term perspective rather than incur additional cost of environmental investigation and consideration.

The costs of environmental investigation include: cost of hiring an environmental specialist; cost of specialist software for instance, for energy rating; cost of maintaining a database for eventual life cycle costing; the cost of collecting data on market transactions with an environmental dimension and the cost of obtaining access to other databanks with environmental information (ibid.).

80% of the respondents rated that the cost of environmental investigation as a very significant factor limiting incorporation of environmental considerations in property reports. Most (59%) of respondents were of the opinion that clients would be willing to pay for the additional cost of environmental investigation subject to the fee being legislated and made a legal requirement. Some respondents further noted that the clients would only be willing to pay if they were environmentally aware and if the scope and purpose of the report warranted the additional cost of environmental investigation.

The study further found that 77% of the respondents sub-contracted environmental investigation to an environmental expert or specialist. It may well be that the cost of environmental investigation can be reduced through training to increase the skills base for Surveyors and enable them to gain qualifications to provide guidance on environmental issues if not be specialist themselves. This would increase the supply of professionals informed on matters relating to the urban built environment and therefore keep the costs of environmental investigation in check.

4.5 Lack of a Checklist for Environmental Issues in Property

Dixon T. and Richard T. (1996) in their research paper which aimed to formulate a set of ‘best practice’ approaches which Valuers could use to guide them when valuing contaminated or potentially contaminated investment properties recommended that RICS incorporate a ‘Property Observation Checklist’ which Valuers could use to assess the basic environmental risk of a site or property whilst conducting a property inspection. According to the researchers, such a checklist has been successfully used in the United States to identify possible environmental factors for which a specialist environmental assessment was required. The Checklist had also eased professional indemnity insurance problems.

4.6 Ignorance of Government Legislation on Environmental Matters

According to the R.I.C.S, environmental sustainability is a long term trend driven by a combination of increased legislation and regulation, a greater demand by occupiers, increased market knowledge with benchmarking for sustainability criteria and more emphasis on Corporate Social Responsibility issues (RICS, 2008a:5).
Surveyors need to keep abreast with environmental legislation which affects property values or the way properties are managed. In the United Kingdom, there is a proposed law requiring properties to be graded on their green credentials. Energy Performance Certificates (E.P.C’s) are compulsory when a home is marketed for sale and will be extended to commercial premises and residential letting from April to October 2008. E.P.C’s represent a major step towards combating climate change and are part of the EU Energy Performance for Buildings Directive (EPBD) which all EU members must implement by January 2009.

4.7 Other Mitigating Issues in the Local Context

From the focus group discussion and the interviews, further factors that limited incorporation of environmental considerations in property reporting were assessed as follows:

4.7.1 Low Level of Fees

Interviewees were of the opinion that as fees charged by Surveyors were regulated by law, clients would only agree to pay the additional cost of environmental investigation if they were environmental aware and if the fees were legislated as a legal requirement. It was further noted that undercutting of fees, whereby Valuers or Property Managers quote the lowest fees in order to win a tender or work contract, resulted in clients sacrificing the provision of useful environmental advise in preference for lower fees.

From the discussions it was noted that some corporate clients required that environmental considerations be incorporated during property reporting. These are mainly multinational companies with global environmental policies requiring environmental considerations during reporting. These companies would also meet the cost of environmental investigation. It was also noted that mortgagors were increasingly demanding Environmental Impact Assessment reports prior to releasing funding and EIA reports were a pre requisite for development approval by the local authorities.

4.7.2 Environmental Issues not yet a Priority

The study found that the local real estate industry did not give environmental issues priority in professional practice. The discussants felt that the professionals and professional societies were still dealing with more basic issues such as amendment of the level of scale fees, fee undercutting among firms, low remuneration for employed professionals, investment in modern technology such as laser distance meters, digital cameras, computers and Global Positioning Systems.

4.7.3 Lines of Business involving Environmental Aspects of Real Estate.

The study noted that most graduates of B.A Land Economics practiced either Valuation or Property Management upon graduation. Few professionals had pursued lines of business related to the environment such as Environmental Impact Assessment or Environmental Audit. Further although the coursework for the Master of Arts degree in Valuation and
Property Management incorporated Valuation of Natural Resources and Environmental Impact Assessment, it was difficult to establish if any candidates went on to practice Valuation of Natural Resources or Environmental Impact Assessment. It was noted that Environmental Impact Assessment was mainly carried out by Physical Planners who are registered as Environmental Impact Assessors by the National Environmental Management Authority (N.E.M.A).

4.7.4 Continuous Professional Development

From the discussions, the researcher found that Surveyors and their employers are more keen on work productivity and profit margins than professional development. It was noted that the attendance of CPD seminars had improved since a system for awarding points against attendance was introduced in year 2006. The Institution aimed to relate the points awarded to the qualification of a member to obtain the I.S.K Certificate of Participation which is issued to members annually and is a requirement for Valuer’s applying for the annual Practicing Licence. He said that the Institution tried to educate its members on relevant topical issues that faced the professionals.

4.7.5 Lack of a System to Disseminate Research Findings

From the interviews, it emerged that there is no formal system of disseminating academic research findings to practitioners. The researcher noted that practitioners who required specific environmental information had to visit the University library to search for academic research material. It was further noted that many research papers were prepared by academic staff for conference proceedings but there was usually no follow up to disseminate the information to professionals.

4.7.6 Client’s Environmental Awareness

The study found that valuation clients were generally environmentally aware especially as financiers now required E.I.A reports on properties before releasing funds. However, it was noted that clients only took environmental assessments seriously if they were of commercial significance to them.

5. CONCLUSION

The study found that Valuation Surveyors considered most environmental aspects to be of high significance in property reporting but only small number of the surveyors actually incorporated environmental clauses during reporting in practice. The study found that this resulted from the lack of capacity to make environmental assessments and limited relevant environmental information. It also found that there were no formal channels of disseminating research findings on environmental issues to practitioners and that environmental information was sometimes not adaptable to practice.
The study further found that there was an apparent lack of awareness of environmental issues in property among the older respondents. The older professionals also did not find environmental issues in property as significant as other property aspects traditionally considered. The Focus Group concurred that older professionals where more concerned about traditional issues in real estate such as valuation bases, professional fees, land tenure reforms etc while the younger professionals were more aware about global concerns such as the environment.

The study found that the cost of environmental investigation was the leading cause of non incorporation of environmental considerations during property reporting. This disapproved the study hypothesis that the unavailability of environmental information was the main cause of a low level of awareness of motivation for Surveyors to incorporate environmental considerations during property reporting.

The study further found that majority of the respondents felt that professional societies did not do enough to adequately raise awareness within the profession regarding environmental issues in real estate and their consideration during property reporting.

6. RECOMMENDATIONS

6.1 Capacity Strengthening by Professional Societies

The study recommended that the Institution of Surveyors of Kenya (I.S.K) as the professional society for Valuation and Property Management Surveyors should sensitize members on environmental issues in real estate in the local context. It was proposed that members be trained in the basic principles of conducting Environmental Impact Assessment and Environmental Audits. The training should also stress the need for the protection of the environment and the need for stewardship of environmental resources for future generations.

It was proposed that member sensitisation and capacity building be done through Workshop; publications such as the quarterly newsletter; through review of the Valuers and Estate Management Surveyors Handbook to incorporate guidance on current environmental issues; and by incorporating environmental aspects to the coursework for the ISK Diploma.

6.2 Increasing Availability of Environmental Information to Practitioners

The study recommended that ISK as a professional society take measures to make academic and other research findings available to its members. The study proposed that such findings be disseminated through the internet and other media easily accessible to the society’s members. The study noted that information derived from the internet was not always applicable to local circumstances as it may relate to a more developed property market in a different climatic region. It was further noted that academic papers were sometimes not adaptable to practice as they were often too theoretical.
The study further recommended the use of media campaigns though costly for education of both professionals and the public on environmental perspectives in real estate.

6.3 Changing Attitudes of Surveyors to the Significance of Environmental Issues in Property Reporting

The study recommended that I.S.K takes a leading role in educating its membership about environmental aspects of real estate and the application of environmental legislation to practice. It further recommended that I.S.K collaborates with the National Environmental Management Authority (N.E.M.A) to initiate and lead a nationwide campaign to raise awareness on environmental issues in real estate with the aim of encouraging the public to be more environmentally aware. An awareness campaign showing the role of individuals may invoke a change in individual value systems if it clearly shows that responsibility of environmental stewardship lies with individuals and subsequently result in institutional change.

6.4 Application of Environmental Assessment Training to expand Core Services

The study recommended that I.S.K encourages its members who have a Master of Arts Degree in Valuation and Property Management and are academically qualified to conduct Environmental Impact Assessments and Environmental Audits to register as environmental experts for the N.E.M.A under the Environmental Management and Coordination Act (EMCA). This would create an environmental experts class within I.S.K and therefore make environmental information more accessible as it will come from within its membership.

This would also increase the number of environmental experts in this field therefore increasing the supply of services and bringing the cost of environmental investigation down. Currently, environmental experts who are registered under NEMA are mostly Land Use Planners. These experts are contracted by Property Managers to conduct the mandatory annual Environmental Audits on the buildings they manage and by Valuers to make environmental investigations and comments for valuation reports.

6.5 Widening Scope of Academic Training on Environmental Aspects

The study recommended that the School of Built Environment at the University of Nairobi reviews the content of the three offered courses containing aspects of environment in order to tie them to practical environmental issues in Valuation and Property Management Practice.

It further recommended that training in environmental aspects in real estate should start at the foundation level to enable students appreciate the significance of environmental issues and their application to work practice. Academic training at undergraduate level would increase the number of environmental experts and bring in environmentally prepared professionals into I.S.K leading to reduced costs of environmental investigation. It would also improve the quality and completeness of property reports through incorporation of environmental issues in real estate.
6.6 Regulation & Enforcement

The study recommended that I.S.K formulates regulations making environmental considerations mandatory during property reporting. Reports not incorporating environmental considerations should be viewed as professionally negligent and incomplete. This would compel the professionals to find ways to up-date themselves with environmental issues in real estate and be more environmentally aware. This would also enable professionals to appreciate the significance of environmental aspects in real estate to building values and change their attitudes to the importance of the environment relative to other traditionally considered building aspects.

6.7 Participation of Surveyors in Private Sector in Government Initiatives

The study recommended that Valuation Surveyors serving in the private sector engagement with civil society groups dealing in the environment sector and involvement in government initiatives related to environmental protection and management say through involvement in cross sectoral Technical or Steering Committees on Urban Environment, Rural Environment, Infrastructure, Housing or Agriculture Sectors in the different government Ministries. This would enable the professionals to have a holistic view of the consequences of poor environmental management practices and to appreciate the benefits of environmental management and conservation.
REFERENCES


BIOGRAPHICAL NOTES
Makena Kaaria-Ogeto holds a Bachelor of Arts Degree in Land Economics from the University of Nairobi and a Master of Science degree in Surveying from the University of Reading. She is a Full Member of the Institution of Surveyors of Kenya (ISK), a registered Valuation Surveyor and an Associate Member of the Royal Institution of Chartered Surveyors (RICS). She currently works for the Institution of Surveyors of Kenya as a Programme Officer for the Non State Actors Land Reform Programme.

CONTACTS

Makena Kaaria-Ogeto
Institution of Surveyors of Kenya
P.O Box 40707 - 00100
G.P.O
Nairobi
Tel. +254 020 313 490
Fax + 254 020 221 4770
Email: makenajk@yahoo.com/ nsaprogramme@isk.or.ke
Web site: www.isk.or.ke