

Role of “Women in Surveying” in Environmentally Sound and Sustainable Development

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Key Words: Environmental sustainability; Women in surveying; Global Action.

SUMMARY

Acceptance of the principle of incorporating women as partners in the drive towards sustainable development gained significant momentum following the **UNCED Conference. Global Action for Women towards Sustainable and Equitable Development** have continued to manifest themselves as activists for environmental protection at local, national and international levels. For instance, many women and professional groups have taken an active role in formulating and implementing local agenda, seeking to bring about more sustainable production and consumption patterns. Together with environmental groups and other non-governmental organizations in civil society, they have continued to monitor the implementation of the agreements reached in international conventions and world conferences. The Women's groups have devised an effective mechanism for participation in international negotiations and policy making. The Fourth World Conference on Women, held in Beijing, China, in 1995 specifically addressed gender inequalities in the management of natural resources and in the safeguarding of the environment as one of the twelve critical areas of concern in which strategic action was required. **Women in Surveying (WIS)** in Nigeria and other professional groups have also played enviable role in ensuring that the women are not left out in the scheme of things with regards to sound and healthy environmental sustainable practices.

In line with above , this paper is attempting to highlight the **role of Women- in -Surveying in Nigeria(WIS)** in environmental decision-making processes and ways of integrating them into policies and programme on sound environmental management for sustainable development and also advocating their increased participation in governance in line with the objectives of the Millennium Development Goals.

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1. INTRODUCTION

The issue of environmental sustainability presents one of the biggest challenges to the survival or otherwise for the modern society. Environment and ecosystem degradation is the result of the dynamic interaction of socio-economic, institutional and technological activities. Everything that we need for our survival and well-being depends, either directly or indirectly, on our natural environment. Sustainability creates and maintains the conditions under which human beings and nature can exist in productive harmony, that permit fulfilling the social, economic and other requirements of present and future generations. Sustainability means refusal or inability to rob from the future to pay the bills for today. An environmentally sustainable society satisfies the basic needs of its people without depleting or degrading its natural resources.

The World Commission on Environment and Development (WCED) or the Brundtland commission named after its chairperson, Former Norwegian prime minister, Mrs. Gro Harlem Brundtland defined the concept of sustainable development more precisely in its report “Our Common Future” as development that meets the need of the present without compromising the ability of the future generations to meet their own needs (WCED, 1987). The publication paved way for the United Nations Conference on Environment and Development (UNCED) held at Rio de Janeiro in 1992 and seconded by the Habitat Conference at Istanbul, 1996, which also emphasized on the need for sound environmental management.

At the Rio de Janeiro conference, the concept of sustainable development became popularized due to its emergence as one of the key resolutions of the United Nations Conference on Environment and Development (UNCED). An important feature of the concept of sustainability is that it links the present to the future. This aptly illustrated in the figure 1.0 which concisely illustrates all the factors to sustainable development which includes social justice, ecological integrity and economic prosperity.

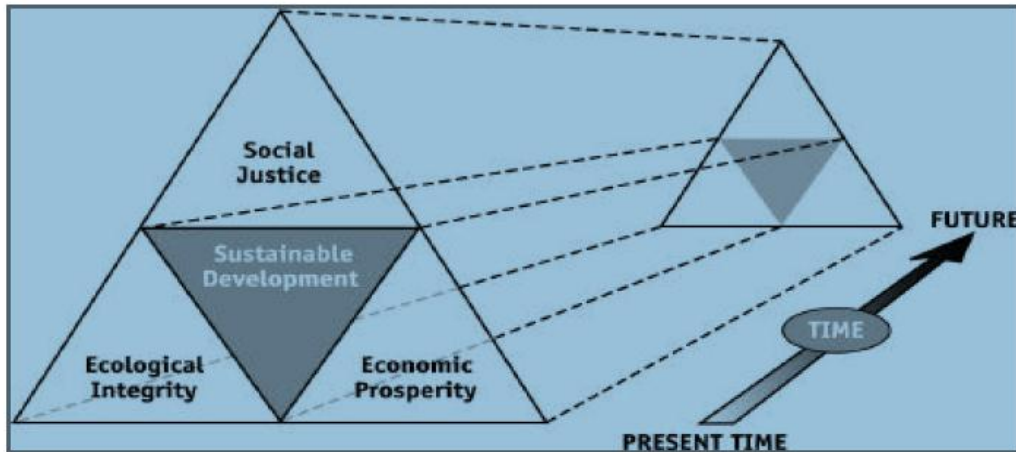


Fig.1.0. Diagram illustrating sustainable development. (Source: United Nation International Research and Training Institute for Advancement of Women working draft).

The concept is also explicit in its understanding of equity: Inequity is the largest environmental problem in the world; it is also a fundamental development problem. The Brundtland commission explains how environmental stress is often the result of the growing demand on scarce resources and pollution generated by rising standards of the affluent. We have to recognize that poverty itself on the hand creates environmental stress in different way. Those living in abject poverty are often pushed to destroy their immediate environment in other to survive.

Indeed, sustainable development recognizes that there can be no improvement in standards of living, no eradication of poverty, without wise use of scarce natural resources that minimizes the impact of our actions on the wellbeing of our children and grandchildren.

1.1 Challenges of Sustainable Development Globally

There is evidently no generalized consensus as to the exact order or contents of environmental problems affecting humankind. Nevertheless, it can be suggested that the majority of scientists would acknowledge that the more critical problems endangering humankind's survival on planet Earth include, at least, the following: the depletion of the ozone layer, global climate changes, and the accumulation of toxic chemical or radioactive wastes, the human over-appropriation of biomass, and the loss of biodiversity.

Other problem include nuclear accidents and other specific forms of radioactive contamination, acid rain, air and water pollution, desertification and other forms of land degradation, depletion of natural resources, and floods. The new European development policy requires that environment and sustainable management of natural resources be treated as a cross-cutting issue to be integrated into all development activities. It can also be included as a focus of action in country and regional support strategies, for example through support for:

- management and protection of **forests, water, marine resources and biodiversity**
- access to **sustainable energy**
- **climate change , desertification and soil degradation**
- sustainable management of **chemicals and waste**
- sustainable **production and consumption**

In January 2000, the leaders of 189 countries agreed on a new vision for the future – one with less poverty, hunger and disease, greater survival and improved health for mothers and infants, children with primary education, equality for women, and a better environment. It is a vision of a world in which developed and developing countries work in partnership for global development.

For this vision to be realistic the resources has to be managed sustainably and fairly which is fundamental to achieving the UN's millennium development goals. The Millennium Development Goals provide a framework for this vision, with targets by which to measure progress. The MDGs are:

- Eradicate extreme poverty and hunger
- Achieve universal primary education
- Promote gender equality and empower women
- Reduce child mortality
- Improve maternal health
- Combat HIV/AIDS, malaria and other diseases
- Ensure environmental sustainability
- Develop a global partnership for development

The overall objective of the MDGs is hinge on achieving and ensuring environmental sustainability. This landmark goal cannot be realized without the integration of the female gender in the overall development process.

2. CONTRIBUTIONS OF WOMEN TOWARDS SUSTAINABLE DEVELOPMENT:

There is growing evidence that women in several countries around the world are taking central roles in the grass-roots environmental movement. And there is increasing belief that developmental policies that do not involve women will not be successful in the long run.

The Platform for Action, adopted by the Fourth World Conference on Women in Beijing in 1995, identified the need to involve women more actively in environmental decision making at all levels as well as to incorporate the gender perspective in all strategies leading to sustainable development (Chelala, 2001).

Since the end of the 1980s, the emphasis on women as the victims of environmental degradation has been gradually superseded by one in which women are seen as resource managers. This reflects a shift in the way women came to be seen by the development establishment, from passive aid recipients to active agents of change. Since resource management is seen to be a critical element of sustainable development, it has been stated that women's full participation is essential for the attainment of sustainable development (World Resources Institute, UNEP, UNDP 1994; UNFPA 1992).

Three interrelated propositions have been made to show the link between women's empowerment and sustainability.

First, it has been contended that women have a greater moral commitment to the environment than men. According to Jiggins(1994), the female participants in the Women's World Conference on the Environment noted that one of the main reasons for their involvement in environmental activism was their concern for the well-being of future generations, and that male respondents ranked this interest much lower in their list of concerns.

Secondly, it has been argued that this greater commitment is reflected in the way women's grassroots movements have undertaken positive actions to protect the environment.

Thirdly, given their moral commitment, the existence of women in the decision-making process at all levels would make a significant difference in actions that affect the environment. The rationale is that women, by reason of their values and attitudes, their penchant for protecting the environment, could make a qualitative change in the decision-making process of institutions that will significantly contribute to the achievement of sustainable development. (Zakharova,1996).

2.1 Women in Quantity surveying and sustainable construction

In order to balance the economic equation of sustainability and affordability at a practical level, the women in Quantity Surveying can follow what is called The Ten Commandments for sustainability in design and construction. They are:

- Re-use existing buildings: Re-using existing buildings reduces costs and is quicker.
- Design For minimum waste: Make designs simple and with re-use in mind.
- Aim for lean construction: Avoid over specification and use pre-assembly and repetitive components wherever possible.
- Minimize energy in construction: Use minimum quantities and avoid energy intensive materials like aluminum and cement.
- Minimize energy in use: Make best use of the natural environment. For example, open and close windows, rather than use air conditioning.
- Don't pollute: Dispose of waste and discharges sensibly. Make efficient use of the existing transport infrastructure.

- Preserve and enhance biodiversity: Protect the natural habitat.
- Conserve water resources: Recycle rain and waste water.
- Respect people: Build community relations and provide public information. Look after staff with regard to Health and Safety.
- Set targets: Targets should be set for the reduction of energy used, embodied energy, transport and waste. Setting targets is also a way of measuring achievements.

The Quantity Surveyor is an integral part of the property life-cycle and can influence other sectors of the property industry. The women in property industry as a whole need to:

- increase awareness in social responsibility
- increase awareness in sustainable construction
- continue to develop technology that can make currently expensive sustainable methods more economically viable in the future
- aim for every development to be constructed using measured sustainable methods.

2.2 Women Engineers In Sustainable Development

The engineers of the future must be much more interdisciplinary. Engineers have to join forces with biologists, chemists, meteorologists, economists, planners, political scientists and community leaders in unprecedented ways to lead society on a sustainable path. There should be need for clean engineering solutions, intelligent modifications of nature, balance between global risk and safety.

The women engineers should be at the forefront of Green engineering campaign. Green building (also known as green construction or sustainable building) refers to a structure and using process that is environmentally responsible and resource-efficient throughout a building's life-cycle: from siting to design, construction, operation, maintenance, renovation, and demolition. This requires close cooperation of the design team, the architects, the engineers, and the client at all project stages. The Green Building practice expands and complements the classical building design concerns of economy, utility, durability, and comfort.

Although new technologies are constantly being developed to complement current practices in creating greener structures, the common objective is that green buildings are designed to reduce the overall impact of the built environment on human health and the natural environment by:

- Efficiently using energy, water, and other resources
- Protecting occupant health and improving employee productivity
- Reducing waste, pollution and environmental degradation

The women engineers should change the focus of training from being on controlling pollution and waste once created and on remediating environmental damage, to reducing or eliminating pollution and wastes generation at the source.

2.3 Women Planners And Sustainable Development

The role of female planners cannot be underestimated. Sustainable physical development and management of human settlement hinges greatly on the effectiveness of physical development plans. This involve the reconciliation of land uses, provision of the right site for the right use, control of development, provision of facilities, services and public goods, preservation, protection and conservation of resources, preservation of heritage among others (Oduwaye,2009). Urban and rural planning are services and do not necessarily result directly into goods. It is judged by the outcome of the implementation of the planning provisions and programmes. They provide plan-document to be used for physical development of the human habitat. Therefore, planning documents are vehicles for environmental development. With the use of a plan diagram backed-up with legislative guidelines and administrative reports planning documents set the direction of future growth. The women planners have to make sure that the plan, guidelines and report will be such that will lead to a sound and sustainable development. To achieve this, the women planners have to be adequately represented in the legislative (i.e the decision making body of the country) where the decision for the guidelines are been taken. Bing in the legislative will also assist them in carrying out the eight programmes as outline by UNCED Agenda 21

- Promotion of adequate shelter for all;
- Improvement of human settlement management;
- Promotion of sustainable land use planning and management;
- Promotion of integrated provision of environmental infrastructure;
- Promotion of settlement planning and management in disaster-prone areas;
- Promotion of sustainable construction industry activities and
- Promotion of human resource development and capacity-building for human development.

2.4 Role Ofestate Valuers / Surveyors

The Estate Valuers' or Surveyors play the following enviable roles in the environment:

- Provide advice on site selection
- Prepare feasibility and viability appraisals of housing development schemes

- Sourcing of funds on large housing schemes on behalf of clients
- Acts as project team leader
- At post construction stage he takes charge of the management and maintenance to ensure the property continues to command the economic rent and prestige to the property owner

2.6 Women- In- Surveying In Nigeria (Wis)

The Nigeria Institution of surveyor's which was established in 1934, was one of the oldest organized professional Bodies in Nigeria. The Institution was initially as "Licensed Surveyors Association" which was later renamed the "Land Surveyors Association of Nigeria" with the late Surv. C. T. Olumide as chairman, whose memories is now engraved in an annual lecture tagged "OLUMIDE MEMORIAL LECTURE". In 1966, the present name "Nigerian Institution of Surveyors" was adopted. The Nigerian Institution of Surveyors is the umbrella professional organization for all surveyors in Nigeria, whether in private practice, Government or Academia.

Women- in -surveying (WIS) is the women arm of the Nigerian Institution of Surveyors. Women-in-Surveying in Nigeria as a professional body started about ten years ago under the leadership of Surv F.K. Omatsola fnis and the membership of this Association currently is about two hundred and fifty .The essence of this feminist gender arm of Nigerian Institution of Surveyors borders on the pursuance and achieving of the objectives of MGDs.

Surveying particularly had for decades been monopolized by the men but today the story is quite different, despite the challenges faced by women in surveying profession, the hardworking andcommitted female Surveyors have made land mark achievementsfor example, the first woman Surveyor General of the Federal Republic of Nigeria was Late Mrs. Yinka Adekoya. In Lagos state of Nigerian the first female surveyor to become permanent secretary was Alhaja I.O Fassai..These women have contributed in no small measure in the upliftment of professionalism during their reign.

2.7 The Role of Women- In -Surveying (Nigeria)

A Surveyor is a professional person with the academic qualification and technical expertise to practice the science of measurement; assemble and assess geographically related information; use that information for the purpose of planning and implementing efficient administration of the land, the sea and structures thereon; and instigate the advancement and development of such practices (Asoegwu, 1996, Kufoniyi, 1997).

Magel (2005) observed that"Surveyors should play a visible role in the society and that they should also be actively involved in the provision of reliable data for planning, contributing meaningfully to urban and rural development, valuation and real estate management and environmental decision making. Much cannot be achieved in this regard if the women surveyors are neglected or relegated to the background. This responsibility placed on Surveyors to ensure

that the environment is ordered is a holistic one. Thus, there is need to harness the enviable contributions of women in surveying

Because Women Surveyors by their nature are “enablers for the local people and the less privileged”, mediators between citizens and authorities and Advisors to politicians and state institutions”, they are very compassionate in their professional practice.

A nation cannot have any meaningful development without adequate and up-to-date geoinformation. This is evident in engineering constructions and civil works (new roads, bridges and high rising buildings), location based services like communication lines, power, and steel, sewage lines etc. Before any meaningful or sustainable development is achieved the Surveyor or the Geospatial expert must provide the pertinent information or baseline data for engineering designs and subsequent construction works. Women Surveyors have the track record of been amongst the industry’s best as they are not known in any way to compromise standards and best practices.

Women Surveyors are actively involved in the provision of geospatial data required for planning and execution of associated projects for sustainable development. They are known also to have contributed in providing environmental data that aids in reduction of environmental vulnerability hazards such as natural disaster, desertification, flooding, collapse of houses and bridges.

Women in surveying like their male counterparts also have contributed in the production of large scale plans which are fundamental datasets for development and planning of educational facilities, health, recreational and security etc.

In terms of Housing, their roles cannot be underestimated. Most female Surveyors are GIS experts and their professional inputs have aided the government in the provision of materials for title regularization, ensuring guidance on the location of health and educational facilities as well as the location of police stations and other infrastructures.

For a Nation to have sustainable roads, Surveyor needs to set out roads, provide their height and other necessary information that will enable the Highway Engineer to design and construct good roads. A good number of women Surveyors are actively involved in this sector.

There is need to integrate the Women - in -Surveying in Nigeria into all facets of the geospatial data provision for use in development of the spatial data infrastructure policy of Nigeria for sustainable development.

The women in surveying are advocacy tools for promoting and encouraging more young women to choose scientific careers, combating gender inequality and helping in the realization of the goals of the Millennium Development Goals (MDGS) and sustainable national development.

2.8 Challenges of Women In Surveying In Nigeria

Women face many obstacles in their efforts to contribute positively to environmentally sustainable development and management.

- One of the most devastating of these obstacles is the poverty that large numbers of women face daily.
- In addition, women face perils from indoor air pollution from cooking fires and the burning of bio-mass, the carrying of heavy loads, unsafe water supplies and inadequate sanitation, the use of household chemicals and other environmentally unsound practices.
- Women are further hindered in their capacity to respond to environmental challenges by a lack of resources which may be financial , information, agricultural inputs and discrimination from men, cruel cultures and traditions, poor education and gender neglect and perceived inequality, etc.
- They frequently have no rights to land ownership even when they may be the principal farmers.
- Their education and training is often neglected.
- Most importantly, even though women are critical stakeholders in environmentally sustainable development, they are seldom included at the policy and decision-making level of different governments, professional bodies and NGOS.

Evidently, in Nigeria, the Survey council of Nigeria (SURCON) which is the body legally empowered to regulate the practice of the surveying profession activities in the country in all ramifications has a Council made of 59 members, as follows:

- The President of the Council, who is appointed by the President of the Federal Republic of Nigeria,
- 36 Surveyors General of the States,
- The Director of Survey & Mapping, FCT,
- 12 Representatives elected by the Nigerian Institution of Surveyors,
- 5 Representatives of the Federal Government including the Surveyor General of the Federation and
- 4 Representatives of Institutions of higher learning offering Surveying & Geo-informatics.

However, only two women are in this council of fifty-nine members (59). In this council there is no way they can make a positive impact in policy and decision making level in this council.

Again, the Nigerian Institution of Surveyors (NIS), on whose auspices this global gathering is made today has a council which is the highest decision making body. The council is composed of the elected Executives Officers, representative of State Branches, Women-in-Surveying, the

Academia, Association of Private Practicing Surveyors (APPSN) and other recognised sub-group. Ironically, the council has less than three (3) women in their fold. The representation of women in Nigerian Institution of Surveyors (NIS) council and the Survey council of Nigeria (SURCON) show that the professional body and the regulatory body are not gender sensitive. Therefore, the contribution of women toward the overall development of the country will be minimal. This is inimical to the global objective of female integration to sustainable development. Women by their nature have varied preferences from men in choosing their academic field, and the pattern is similar in developing countries like Nigeria and most industrialized countries. Women are more likely to enroll in humanities, arts and education, with social sciences the next preference, while natural science and engineering is the least favored field. Women-in-Surveying face the challenges of male ego from subordinates, superiors and even colleagues who mostly think that a woman should be in the kitchen or at best be in classrooms (UGWULEBO, 2010).

2.9 Encouraging Women Participation In Sustainable Development-The Global Agenda.

Women have been largely excluded from formal and traditional policy and decision-making roles regarding the environment, nonetheless, they have contributed meaningfully to the solution of environmental problems. It is important to observe that granting women an equitable role in environmental decision-making and management would bring to bear their full knowledge, experience and commitment to the solution of environmental problems, rather than merely as an effort to alleviate the symptoms of their disproportionate burden. Women must be seen as capable partners in sustainable development, and not simply as victims of environmental degradation or even solely as beneficiaries of development initiatives. In fact, environmentally sound and sustainable development cannot be attained unless women are permitted to enter the mainstream of environmental decision-making process and management. For women to respond to environmental challenges, they should have access to available resources: financial credits, information, agricultural inputs, and new and energy saving technologies and technical assistance. They should also have rights to land ownership since they may be the principal farmers.

Gender is a leading factor for understanding the intersections of the environment, sustainability and energy. The poor women are at a particular disadvantage from environmental degradation and lack of access to clean water and adequate, affordable energy.

Women's primary role in agricultural production, food preparation and water and fuel collection positions them as vital partners in building and implementing sound environmental policies. However, investing in women is one of the most effective ways to advance sustainable development and fight global climate change, hence, the diverse roles and needs of women must be recognized and addressed in programs ranging from rural development to green job creation and urban revitalization.

Science and technology affect women and cut across all areas of life, particularly economics, education, training and the environment but they have little involvement in the forces that drive the changes which have such a great impact on their lives.

A fuller comprehension of women's role in the economic, social, cultural and political life of their communities, and their direct involvement in decision-making and planning in all sectors will help to ensure practical and sustainable solutions to environmental concerns that benefit the entire society.

3. CONCLUSION AND RECOMMENDATION

3.1 Conclusion

Government is called upon to offer modern geospatial techniques for the monitoring of erosion sites to develop the early warning system necessary to mitigate the loss of lives and property during disaster.

Government is also called upon to involve the use of maps in planning industrial location in order to reduce environmental pollution on the citizenry.

Poverty and nation-building are strange bedfellows, whether the poor are 20% or 85% of the population. A largely marginalized citizenry, increasingly crippled by poverty and the lack of basic needs, can hardly be expected to play its proper role in the development of the nation.

Nations are built by healthy and skilled citizens. On grounds of both equity and efficiency, we need to promote the access of the bulk of the Nigerian population to basic education, health, and housing.

Nigeria needs a social contract with its citizens as a basis for demanding their loyalty and support (Gambari, 2008). The challenges of nations building: The case of Nigeria)

The former President of Nigeria Olusegun Obasanjo recognized the importance of women education and he encouraged women to have interest in politics. "Gone are the days" he once said "when the rightful place of the woman is in the kitchen. When one educates a woman he has actually educated a nation

3.2 Recommendation

Having critically looked at the enviable roles women are to play in sustenance of development, the following suggestions are hereby proffered:

- There is need for in Nigeria and in all developing economies to re-orient our value system towards the female gender and her contributions to overall national development.

- There is also need to vigorously pursue the development (educationally and otherwise) of the female capacity (capacity building) so that her contributions would be properly harnessed.
- Nigeria should as a matter of fact implement the MGDs policy thrust on eradication of all forms of gender discrimination in the appointment of women to enviable positions especially those ones that have a multiplier or ripple effects on the environment and sustenance of development.
- Government, NGOS, Professional and regulatory bodies should encourage the formation of women professional groups that will foster sustainable development.
- Women who have made meaningful contributions to humanity like their male counterparts should be celebrated and immortalized. This will elicit more meaningful and sustainable contributions from the female professionals.

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