

## **Utilization of Research for the Realization of Sustainable Development Goals (SDGs) for National Development in the Twenty-first Century**

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### **Abstract**

*A paper on the role of research in the realization of the sustainable development goals, this paper explores various opinions of authors and researchers towards the concept of research and sustainable development. Sustainability is mostly perceived as the combination of environmental, social, and economic performance. Though, there is difficulty in defining sustainable development. Today, the needs of many people are not met, and at the same time the hope of future generation to meet their needs is being compromised. It is as a result of this that, sustainable development goals has raised as a concept affected by the need to offer people a kind of development which can*

*meet the needs of the present without compromising the capacity of future generation to meet theirs. Economic development may result in an improvement in the standard of living related to a small proportion of the population while the majority of the population remains poor. The concept of sustainable development has become a widely recognized goal for human society in the 21<sup>st</sup> century. This paper therefore focuses on the concept of research, sustainable development, the role of research in the realization of sustainable development goals, challenges to the realization of SDGS, suggestion and way-forward.*

**Keywords:** Utilization of Research, Development Goals, Sustainable Development Goals, National Development.

### **Introduction**

The concept of sustainable development has become a widely recognized goal for human society of the 21<sup>st</sup> century. The idea of sustainable development came into light in 1987 with the publication of our common future, which firmly established sustainable development as a crucial component of international development (Sneddon, 2006). As the anomalies were increasing inequalities within and among the nations increases and poverty is on the increase, especially in developing countries. In recent years the United Nations have tried severally to make the world better place for people to live including the destitute and rich. In pursuance of this, the United Nations had put various policies in place which are all geared towards achieving the set goals. In the documentation of Hwang and Jiwon, (2000), it was recorded that owing to the ravaging challenges faced by a lot of people across the globe, ranging from rampant epileptic lifestyles of the people to poverty, gender segregation and dichotomy in ecosystem and their likes. This led to the conglomeration of leaders from 189 countries in a meeting that was held in the United Nation headquarters in New York in September 2000. The resolution of the meeting birthed the popularly known Millennium Development Goals (MDG). This was meant to address the development bottlenecks round the various nations of the world.

Upon the review of the MDGs made by the United Nation in 2015, several shortcomings were discovered pertaining the effectiveness of the MDGs. This review eventually gave birth to the currently known Sustainable Development Goals (SDGs). The Sustainable Development Goals was initiated to improve on the weaknesses or deficiencies of the Millennium Goals implemented earlier (UNDP, 2019). Some Scholars have written on the various contribution made to enhancing the achievement of the SDGs. However, there cannot be substantial measurable contribution without research and that is why this paper focuses on the realization of Sustainable Development Goals through research.

### **Concept of Research**

Research has been defined by various scholars and authors in series of correspondence, proceedings, publications, research extract and the likes. Amongst them are the few definitions considered for the purpose of this paper. Iowa, (2002), defined research from a logical point of view as a deliberate examination, advancement in research, assessment, poised to create a generalizable fact or information. Research also implies a look for actualities - answers to inquiries and Solutions to Issues. It is a Purposive examination. It is a "Sorted out request" (It looks to discover clarifications to unexplained marvel, to order the dubious suggestions and to revise the misconstrued realities). Exercises which meet this definition constitute explore for motivations behind this strategy.

Searching it again and again means Re-search. Research is defined as human activity based on intellectual application in the investigation of matter. The primary purpose for applied research is discovering, interpreting, and the development of methods and systems for the advancement of human knowledge on a wide variety of scientific matters of our world and the universe. Research can use the scientific method, but need not do so. Research is an art of scientific investigation. It is regarded as a systematic effort to gain new knowledge. The dictionary meaning of research is "a careful investigation or enquiry especially through search for new facts in any branch of knowledge". Definition of

Research comprises defining and redefining problems, formulating hypothesis or suggested solutions; collecting, organizing and evaluating data; making deductions and reaching conclusions; and at last carefully testing the conclusions to determine whether they fit the formulating hypothesis (Walize & Wienir, 2015). Stephenson and Slesinger defined research in the Encyclopedia of Social Sciences as “The manipulation of things, concepts or symbols for the purpose of generalizing to extend, correct or verify knowledge, whether that knowledge aids in construction of theory or in the practice of an art”. Research is an organized and systematic way of finding answers to questions” Systematic because there is a definite set of procedures and steps which you will follow. There are certain things in the research process which are always done in order to get the most accurate results.

According to Creswell, (2016) Research is a process of systematic inquiry that entails collection of data; documentation of critical information; and analysis and interpretation of that data/information, in accordance with suitable methodologies set by specific professional fields and academic disciplines. In the same way, American sociologist Earl Robert Babbie in Young, P.V. (2017), defined “Research as a systematic inquiry to describe, explain, predict, and control the observed phenomenon. Research involves inductive and deductive methods.

### **General Significance of Research**

Research assumes a key part in forming the world. Through research, we pick up a superior comprehension of the present most squeezing and complex social and logical issues for example, social decent variety, human rights, malady avoidance, and environmental change. Leaders, general society, and even analysts themselves, must believe in how research is directed, what's more, the resulting discoveries. The advantages of the examination undertaking can't be acknowledged unless the information created is both precise and dependable. Research has its unique significance in solving several operational and planning related problems of business and industry (Kothari, 2003).

### **Concept of Sustainable Development Goals**

Todaro and Smith (2004) conceive development as a multidimensional process involving major changes in social structure, popular attitudes, and national institution as well as the acceleration of economic growth, the reduction of inequality and the eradication of poverty. They maintained that development in essence must represent the whole gamut of change by which an entire social system turned to the diverse basic needs and desires of individuals and social groups with system. Hence, there is a move away from a condition of life widely perceived as unsatisfactory towards a condition of life regarded as materially and spiritually better. It is on this note that the World Bank (1991) asserted that the change of development is to improve the quality of life. According to the report development generally calls for higher income, but it involves much more. It includes an end in themselves, better education, higher standard of health and nutrition, less poverty, a cleaner environment, a richer cultural life and greater individual freedom.

The simple dictionary meaning of the word sustain is to keep from falling or sinking, to keep up or maintain (The Lexicon Webster Dictionary, 1971). Sustainable development therefore means the kind of development that is based on the enduring structures; if not sustainable development is unlikely to take place (Barrow, 2001). What is referred to here is not a flash in the pan improvement, but in-built economic, social and political conditions capable of continuous generation of development. According to Agogo (2013), it is one thing for a society to experience an increase in real per capital income over a period of a few years. It is another thing for that society to sustain the increase. Hence, Sustainable Development refers to what can be done to raise the quality of life and keep it from falling or sinking down. To do this, it involves all aspects of man-social economic, political and other institutional frame works that keep the society going.

Enefu, (2016) defined Sustainable Development as, “the development that meets the needs of the present without compromising the ability of the future generations to meet their own needs”. Sustainable Development has also been defined by

the Nigeria Study/Action Team NEST in Osuji (2004), as, “an approach that combines the development needs and aspirations of the present without compromising the ability of the future while also maintaining ecological integrity”. This, according to Osuji implies a development process that is equitable and sensitive to ecological and environmental issues. It depends on the initiative, resourcefulness, and discipline of human beings who are the managers of developmental programmes. In another definition by Munasinghe (2004), sustainable national Development is a process of improving the range of opportunities that will enable individual humans and communities to achieve their aspirations and full potential over a sustained period of time while maintaining the resilience of economic, social and environmental systems. To Munasinghe, it is a process that helps individuals and communities in achieving their potentials without necessarily compromising the needs and aspirations of the future.

What is happening to the central problem of poverty, unemployment, inequality and the other associate economic variables such as trade, investment and income generally, if these variables are steadily and continually on the high levels there exist a period of sustained development (Eze 2014). The first real attempt from the world conservations, Strategy (IUCN/WWF/UNEP, 1980, Pg 56) to define sustainable development is as follows:

For development to be sustainable, it must take account of social and ecological factors as well as economics ones, of the living and non living resources base; and of the long-term as well as the short-term advantages and disadvantages of alternative action.

Barbier (2012) differentiate two ways of debate at the time about economics development

- i. Focusing on basic needs with emphasis on helping the poor;
- ii. Stressing that real development was impossible without consideration of the environment and without taking into account local social and cultural values and enabling stakeholder participation.

But the most commonly cited definition of sustainable development is that produced in 1987 by the World Commission on Environment and Development (WCED, 1987,p. 43) Assess the economics and defined sustainable development as;

1. Development that meets the need of the present without compromising the ability of future generation to meet their own needs. It contain within it two key concept;
2. The concept of need in particular;the essential needs of the world's poor, to which overriding priority should be given; and
3. The idea of limitations imposed by the state of technology on a social organization of the environment ability to meet present and future needs.

Thus the goals of economics and social development must be define in term of sustainable in all countries developed or developing, market-orientated or centrally planned. Interpretations will vary, but must share contain general futures and must follow from a consensus on the basic concept of sustainable development and on a board strategic framework for achieving it” This formulation seems imprecise and vague since it does not clarify what is meant with the term ‘needs; Dalalcyton and Bass (2000,p.8) explained the meaning of needs according to them:

- i. Meeting the needs of the present means satisfy the economics need, social, cultural and health needs and political needs;
- ii. Meeting such needs “ without compromising the ability of future generations to meet their own needs means minimizing used or waste of non- renewable resource, sustainable use of renewable resources, keeping within the absorptive capacity of local and global sinks for waste.

Although the World Commission on Environment and Development (WCED) focused on the socio-cultural and economic impact of development, the main concern of the implication of global development on the environment at the earth summit, widening gap of access to the economical opportunities and the disparity among those countries with fewer resources was

formally recognized (Seddon, 2006). Only by the year 2002, world summit on sustainable development in Johannesburg expanded the standard definition of sustainable development by including three dimensions; economics, social and environmental. The Johannesburg Declaration (2002) formally acknowledged the three dimensions of sustainable development as being interdependent in that, they can be both mutually reinforcing or in competition. Despite the many efforts to achieve and maintain sustainable development such as treaties and establishment of rules, laws and regulations the fulfillment of the aim is yet to happen. There are many reasons behind these; as actors taking part in these efforts quite divers, such as intergovernmental organizations, nations, international organizations, the private sector and civil society. It is in line with this that DalaClyton and Bass (2000,p.9) groups the roots of the decline such as:Market failures where economics transactions fail to take account of social or environmental costs, and policy failures where governments inadvertently encourage environmental degradation or social problem. The issue is thus not on whether governments should intervene to steer development toward sustainability. On the contrary, Mitlin (1992) argues that, generally definitions involve two components:

- i. The meaning of development (i.e what are the main goals of development: economics growth , basic needs rights etc)
- ii. The conditions necessary for sustainability.

It is widely agreed (at least amongst those promoting and studying the concept) that there are three pillars to sustainable development:

- i. **Economy:** The creation of wealth and livelihoods;
- ii. **Society:** The elimination of poverty and improvement of quality of life;
- iii. **Environment:** The enhancement of natural resources for future generations,”

(Dala-clyton and Bass, 2000, p.9), there exists a relationship between these three pillars of sustainable development. The past societies have had economics, social or environmental objectives, but each of them has been dealt separate from each other as



unrelated parts. The economics growth considered needs of mankind alone by ignoring the interdependent social and ecosystems. As sustainable concept was developed, these objectives are being integrated when possible by making negotiations of trade-offs between objectives in cases when the full integration is not possible. Sustainable development of human society has environmental, material, ecological, social, economics, legal, cultural, political and psychological dimensions that require attention: some forms of sustainable development can be expected to be much more acceptable to humans and, therefore, much further away from eventual collapse than others (Bossel, 1999, p.2).

### **History of Sustainable Development Goals**

In the year 2000, the United Nation Millennium Declaration was received, with eight objectives to be achieved by 2015. Everyone of the 189 individuals from the UN and 23 global associations conceded to these objectives as reported by Hedenus, (2004) The eight Millennium Development Goals are:

1. Cut outrageous yearning and destitution significantly
2. Achieve widespread important training
3. Promote sexual alignment correspondence
4. Decline child death
5. Improve maternal wellbeing
6. Battle HIV/AIDS, intestinal sickness, and different ailments
7. Guarantee ecological supportability
8. Build up a universal organization for development

The Millennium Development Goals exhibited a more noteworthy spotlight on advancement contrasted with earlier dialogs; just a single objective had an immediate association with natural issues. Rather, issues with a greater amount of a natural concentration were tended to through other fora, for example, the worldwide atmosphere arrangements under UN Agenda Convention on Weather Change and significant condition and advancement traditions like the one held in the city of Johannesburg, in South Africa, in the year 2002.

The last came to be called "Rio+10" yet did not get as much consideration as the 1992 meeting and is viewed as less imperative. Be that as it may, concurrences on water what's more, fisheries came out of Johannesburg. Just like the case with different affirmations, the Millennium Declaration and the eight objectives have been viewed as pretty, yet void, words that are not official. In any case, a key distinction from different announcements lies in the work done to recognize quantifiable objectives that are anything but difficult to track and survey. The objectives have had several effects in how worldwide and national aids; are taken care of. The outcomes have been blended. Certain objectives, for example, decreasing considerably the quantity of the world's poor, have been accomplished at the worldwide total level, while others, for example, expanding fairness between ladies and men, have not been accomplished and still appear to be far off. In 2012, the time had wanted the following huge worldwide maintainability tradition, once again in Rio de Janeiro, "Rio+20." The event additionally denoted the start of arrangements on new objectives to supplant those of the Millennium Declaration after 2015. In light of the announcement, that "destitution is the best worldwide test" and Agenda 21 work in progress on new maintainable advancement objectives, hi September 2015 the UN embraced the 17 supportable improvement objectives (SDGs) spreading over a wide cluster of branches of knowledge and taking natural issues back to the fore. Not at all like the eight objectives of the Millennium Declaration, have the new objectives incorporated particular focuses for urban areas, maintainable utilization, atmosphere affect, marine assets, and land-based biological systems. Sachs, [16] said from a logical perspective that the MDGs also had a reasonable feat of accomplishment across some of the stipulated scope of the goals during the span of its existence. Some of the efforts made were significant to a measurable extent as the Millennium Development Goals (MDGs) was well appreciated. However, there were some short comings that made the MDGs not effectively achieved owing to several factor cut across various scopes of influence. Some of the shortcomings were result effects of the basis upon which the goals set initially and some

modifications that came alongside the process of execution and pursuance of the goals. Some of the carefully observed shortcomings of the Millenium Development Goals of the United Nation are listed thus;

- i. Lack of Intermediate objectives and milestone
- ii. Outdated data
- iii. Non-participation of private sectors
- iv. Lack of societal investment/contribution

While the Millennium Declaration objectives were for the most part centered around the poorest countries, this time the reason for existing was to incorporate objectives that draw in and urge all countries to act. As recorded by UNDP, leaders from 193 countries of the world came together in a forum in the year 2015 to face the supposed realities of the future.

Furthermore, what they saw was overwhelming. Starvations, Dry spell, Wars, Diseases, Destitution. Not simply in some faraway place, but rather in their own urban communities and towns and towns. They knew things didn't need to be like this. They knew we had enough nourishment to sustain the world, yet that it wasn't getting shared. They knew there were Pharmaceuticals for HIV and different illnesses, yet they cost a considerable measure. They knew that seismic tremors and surges were inescapable, yet that the high passing tolls were most certainly not. They additionally realized that billions of individuals overall shared their expectation for a better nature. So, the various representatives from these nations arranged and eventually came to a consensus of what is called the Sustainable Development Goals (SDGs). This arrangement of 17 objectives envisions a future only 15 years of that would be freed of neediness and yearning, and safe from the most exceedingly terrible impacts of environmental change. It's a goal-oriented arrangement. Be that as it may, plentiful confirmation we can succeed. In the previous 15 years, the worldwide group cut outrageous neediness down the middle. Presently we can complete the activity. The United Nations Development Program (UNDP) is one of the main associations attempting to satisfy the SDGs by the year 2030. The realistic

achievement of the SDGs will not just be as a dream of the night nor a rocket science, but it will require a very robust contribution from various individuals, groups, organization (both private and non-private), A consolidate effort from almost 170 nations and regions will earnestly enable countries to make the Goals a reality. The requirement of the conscious efforts from the various nations of the earth is to attain and achieve progressive improvement from the previously known MDGs to the presently known SDGs, These goals as stipulated by UNDP, in Hwang & Jiwon, (2000) are listed thus;

1. End poverty in the entirety.
2. Termination of hunger, accomplish sustenance security, progressed nourishment, and economical horticulture.
3. Guarantee sound lives and advance prosperity for all at all ages.
4. To assure evenhanded and comprehensive quality training what's more, advance deeprooted learning opportunities for all.
5. Achieve voluptuous orientation equity and enable ladies.
6. Guarantee maintainable and accessibility of water and effective sanitation for all.
7. Guarantee sufficient access to reasonable, dependable, maintainable vitality for everyone Advance maintained, comprehensive and reasonable economic development, profitable and full, business, also, not too bad work for all.
8. Construct versatile framework, improved industrialization, and cultivate development.
9. Decrease imbalance amongst nations and within nations.
10. Make urban communities and human settlements comprehensive, strong, safe, feasible. Guarantee reasonable utilization and creation designs make critical move to combat change in the environmental and effects (observing understandings made by UNFCCC).
11. Ration and economically make use of the seas, marine and oceans assets for reasonable developmental progress.
12. Ensure, reestablish, advance manageable utilization of earthbound biological systems, economically manage

woodlands, battle desertification, turn around arrive corruption, and put an end to biodiversity disaster Peace promotion and good social orders for feasible advancement, give room for equity for all, assemble viable, responsible, comprehensive establishments at all levels.

13. Fortify the approaches for execution and reintroduce the worldwide organization for maintainable advancement.

### **Role of Research in the Realization Sustainable Development Goals**

The importance of research in various fields of human endeavour cannot be over emphasized as it relates literarily with all that pertains to man and the entire makeup of his existence. As earlier stated, that applied research is one of the types of research that majorly focuses on solving practical real-life problems of different scenarios in the society, organizations, industries, various locality and the likes. Since sustainable development goals of the United Nation is targeted towards making the world a very conducive and suitable place for humanity to stay in. This means that the seventeen (17) SDGs were born out of a passion to solve the generic problems of humanity. Hence, the role of research becomes extremely germane to positively catalyzing the processes and procedure required to attain the reality of it. The SDGs talks about the level of poverty, the standard of living of the people, the ecosystem. All of these are the makeup of the human survival mission. Research will aid the decision-making process of the policy makers at various cadre of the managerial leadership of the SDGs all around the world where the goals intended for. The essence of research in enhancing growth and development of any system or organization is considerably significant. However, the place of quality and good research is not to be compromised because good research work in any sphere of influence, area of specialization, field of endeavor, for any purpose in the regard of solving relevant and related problems is of utmost importance and significance. Hence, quality research work will birth better result and improved situation (Boateng, Heeks, Molla & Hinson, 2008).

## **Challenges for the Realization of Sustainable Development Goals through Research**

### **Finance**

Achieving success in a programme as huge as the SDGs requires a massive amount of financial investments. The rough calculation have put the cost of providing social safety nets to eradicate extreme poverty globally at about \$66 billion a year, while annual investments to improve infrastructure (water, agriculture, transport, and power) could be up to a total of \$7 trillion globally<sup>12</sup>. At the international level, most developed countries have not met the target of allocating 0.7% of Gross National Income (GNI) to international aid in the last 40 years. It will help provide much-needed funds required to implement the goals if these countries could meet their international aid targets. The dependence of low-resource nations on donor agencies has not produced the desired results for various reasons. Nations or Foundations alone will not be able to deliver on the ambitious vision for global sustainable growth and inclusive development that is at the core of the SDGs. Many government aid budgets are not expanding and the private sector will have to take more of the financing and service delivery gaps to achieve the goals.

The private sector can and should become a key partner in this process while large scale engagement, funding remains essential. There should be different types of private sector engagement, finding the appropriate private sector source of finance of finance for each goal. Businesses from high income countries still mostly avoid investment in building the business capacity of lower income countries, even where these are politically stable. Incentivizing such long-term private investments from high income countries towards lower income countries requires pools of – patient capital – capital investment that measures returns not on a quarterly or annual basis, but rather over decades and more, mandated for lower income nations. It is important that there is a link across sectors and countries through incentives for the long-term investment in early stage market development in lower income countries, particularly for products and services that support

sustainable development. If the SDGs are to succeed, they must promote an inclusive approach to growth, and mobilize innovative sources of financing while phasing out investment in unsustainable activities in all. Lack of or insufficient fund to finance research pose a serious barrier to the realization of sustainable development through research.

### **Financial Prudence and Accountability**

There must be accountability for inputs into SDGs at all levels. Donor support to leverage private investment – and private finance generally – needs to be compliant with development effectiveness principles, and there must be robust environmental and social safeguards<sup>13</sup>. There is need for transparency about how private finance is utilized and political leaders and public servants need to show integrity in the manner funds from any source are utilized. Mismanagement of the available fund and lac of accountability is a set back to the realization of sustainable development goals through research.

### **Capacity Building**

Capacity building is important to the success of the SDGs and its goal is to provide the long-term foundation for transformation. While this is often location specific, at a fundamental level, it will requires all sectors in all countries to acquire new skillsets and toolkits for sustainability. It requires training and education in system approaches to solutions, transdisciplinary initiatives, and codesign. What is required is a new generation and category of sustainability professionals who can broker between global, national, and local issues, between research and use, and between biophysical and social aspects of sustainability; notably, this need is as acute in higher as in lower income countries<sup>14</sup>. This may be different for most African countries due to the dearth of skilled workforce. However, there is no better time than now for these countries to call upon the skills and knowledge of their citizens in the Diaspora.

**Economics and Financial Barriers**

Economists observed that the dominating development model tends to focus on economic growth as precedence rather than peoples right or welfare, and environmental processes and limits. This constitute a set back to the realization of sustainable development goals through research.

**Innovation Barrier in Educational Sector**

There is lack of innovation oriented research. This means that there has to be a closer connection between research institute and economy which also overcome problems concerning the knowledge transfer to application in real life. There are so many challenges facing innovation in educational sector such as bad leadership, inability to effect the desired change, etc which constitute a problem to the realization of sustainable development goals through research

**Social Barrier**

Population growth pared with unsustainable consumption and production patterns among the wealthy are the biggest social challenges to achieve sustainable development in Nigeria. Absent of the significant change in human behaviour sustainability will not be potential. There are other social barriers which are the marginalization of the poor and entrenched inequalities, limited awareness about sustainable development. Environmental Issues among both Politicians and the wider public fragmented civil society and government. Insufficient incentive to for the private sector to pursue sustainable development.

**Political Barriers**

Inadequate economic social and environmental methods for policies plans and project are the major barrier combating the implementation of sustainable development.

**Poor Monitoring and Evaluation System**

A basic problem is lack of specific target, measurement and data to track progress, resulting in a lack of information available for



decision-making. It is suggested for strengthening monitoring and evaluation of sustainable development strategies in order to establish a dynamic improvement process, with an objective of increasing their effectiveness. It is recommended that government should turn up deeper and assess the socio-economic impacts of developmental projects, rather than the outcome alone. Absence of or improper monitoring and evaluation of sustainable development goals strategies is a set back to the realization of sustainable development goals through research. The only hurdle to attain sustainability is ourselves. Human nature is the greatest stumbling block on the path to attaining sustainable goals. Until this is resolved, all other positive developments turn to naught. Until an individual places his thought words and deed in a straight line and walks the talk, there will be no any sustainability. If at all there is any semblance, it's purely short term. The answer to this problem lies in understanding consciousness. The universe is the lock and the human being is the key (Raveendra, 2014).

One of the problems as I see it is the gap between rich and poor including rich nations and poor nations. Many poor nations practice sustainability in farming until rich nations come in and exploit their cheap resources (Craig, 2014).

### **Conclusion**

No country in the world can make any meaningful impact today without paying adequate attention to research and development. The technologically advanced nations achieved their present feat because they invested substantially on research and development. Every improvement is traceable to research because there was a problem and the causes of the problem was consciously and effort fully discovered, the required solution was effectively appropriated and the system eventually salvage and something new is being added to knowledge. This is traceable to research through the establishment of various research institutes and higher institutions, but the nation (Nigeria) have very little to show for their effort. This is because the investment in research by the government and private sector has been very minimal and more importantly the

investment has not been focused. Hence, this affects the realization of SDGs.

### **Way Forward**

It is a fact that the level of investment in research and development by any country is according to its level of industrialization, economics and social progress for economic growth and development. Nigeria needs to develop a new frame work of funding of research and sustainable development. The objective of such a frame work is to suggest possible sources of fund on sustainable basis for research and development activities as well as judicious and efficient ways of using the funds with a view to improve on the earlier one. To realize these objectives, Okenta, (2002) advocated the following sources of fund and other guidelines for funding;

- i. The National Risk Found (NRF) Plc which was set up by the raw material research and development council (RMRDC) and the private sector should be encouraged to fulfill its mandate.
- ii. Deduction of about 5% from the federation account on a first charge basis, instead of the present practice of asking the federal state and local government to contribute to research and development separately. Fund from this will be substantial and sustainable.
- iii. The current 2% education level paid by the private sector is a veritable source of fund for research and development.
- iv. Government should strengthen intellectual property laws to encourage producer of knowledge. This will in return enable the government reap the benefit from research findings.
- v. The government should continue to create conducive environment to enable it attract foreign funding for research and development from relevant organization
- vi. In order to ensure availability and judicious use of the fund, an independent institution preferably, "the national institute for research and development funding (NIRDF) should be established with a clear mandate.

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