

OPERATIONALISING SUSTAINABLE DEVELOPMENT PRACTICE FOR AREA-BASED SUSTAINABILITY IMPLEMENTING UN-SDGS (2015-2030) AT THE LOCAL DISTRICT AREA

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Abstract

This paper discussed district sustainability as a set of system delimitations that are practically appropriate and manageable to implement the seventeen UN-SDGs to balance environmental, social, and economic development. By default, the district system is a socio-ecological system and a geographically defined area where the sustainability pillars are balanced to provide a symbiotic condition. However, the consideration and operationalisation of environmental role in the district's socio-economic development decision-making process not explicitly emphasised. The emphasis should focus on the critical role of communication, participation, and collaboration among diverse stakeholders in implementing and operationalising the natural environmental role, the fundamental component of district sustainability, and further democratising natural resources and landscape planning to guarantee district sustainability. If replicated all the districts within state, provincial, regional, and national levels, the sustainable district could aid in the achievement of the 17 UN-SDGs.

Keywords: Sustainability, Environmental, Social, Economic, Operationalisation, Participation, District, Communication, 17 UN-SDGs

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INTRODUCTION

The Earth's ability to support reproductive biology has been outpaced by human requirements on its environmental assets. Despite our continued increase in dependence on nature, people now need and devour more materials than our planet generates in a year. Notwithstanding this, the carbon impact of industrialized nations is five times greater than that of emerging economies, and the incomes of the leading emerging nations are growing ten times faster than those of the Industrial Revolution. Nonetheless, despite this growth, 1.2 billion people still live on less than \$1.25 a day, with approximately 1.5 billion of them experiencing numerous forms of poverty (UNEP, 2017). Also, experts predicted that by 2050, there will be 2 to 3 billion additional middle-class customers, putting even more strain on the Earth's carrying capacity, two as natural resource consumption increases (UNEP, 2017).

The pre-historic human (e.g. nomadic and hunter-gatherer) and ancient civilisations (e.g. Greece, Chinese, Egyptian, Mayan, Roman, and Sumerian) live in harmony with nature (Gomis, A.J.B., Parra, M.G., Hoffman, W. M., McNulty, R. E., 2011). Then, they grew in number and populated the Earth. Today, 7.4 billion people live on Earth, and each one leaves footprints that collectively alter and degrade the sustainable self-regulating natural environment into less functional or irreversible. Humans exploit the natural environment for their social and economic (supply and demand) growth and development (Iwuji C. C., Okeke O. C., Ezenwoke B. C., Amadi C. C., Nwachukwu H., (2016). Hence, social and economic development and growth indefinitely move opposite natural or ecological and ecosystems recovery processes. In a simple explanation, being sustainable means their social and economic growth must not exceed nature's recoverability and ensure that all essential components of biodiversity are well conserved (Tyteca, D., Henry, M., Mahy, G., Vanthournout, E., Haumont, F., 2006).

The adverse impact due to the progression of the unsustainable human population and socio-economic growth is alarming. Hence, the Sustainable Development Goals 2015-2030, an urgent call for partnership action by all developed and developing countries (UN-SDG, 2015), was ratified. After the world leaders or the UN member states adopted the Sustainable Development Goal (SDG) in September 2015, the people worldwide have been envisioning "sustainability". The UN 2030 Agenda of "Sustainable Development (SD.)" warrants "sustainability", an outcome of implementing and achieving the SD's 17 Goals and 169 targets. Goals (SDG). Under the ratification of the UN-SDGs, the UN member states bound to achieve their sustainability by translating and implementing the SDGs into their country-specific national long-term vision, policies, goals, targets, priorities, and action plans. This strategy provides individuals or groups of public, societies, and communities the opportunity to live in a balanced development or growth of social, economic, and environmental conservation (Galli, A., Durovic, G., Hanscom, L., Knezevic, J., 2018).

As it intended to, UN-SDGs serves as the blueprint of peace, health, and prosperity of people now and future. Many people have inquired as to what sense or situation people are living a sustainable life. What words can we use to describe and explain sustainability? Where and under what conditions should sustainability occur and be maintained? Above all, understanding how sustainability

is achieved, measured, and justified is critical (Gomis, A.J.B., Parra, M.G., Hoffman, W. M., McNulty, RE (2011)).

1. FAMILIARISING SUSTAINABILITY

1.1 Sustainability Term

Whenever the term “Sustainability” is used, it refers to “Sustainable Development.” Sustainability is based on long-acknowledged and clear factual evidence that humans survival and well-being depends, directly or indirectly, on the natural environment. The natural environment (ecosystem structure) provides breathing air, drinking water, and a source of food. The natural environment defines the fundamental ways of our communities, the source of renewable and non-renewable energy for civilisation. Moreover, people’s health and well-being, economy, and security require a high-quality environment. Hence, environment (nature) conservation is vital for sustainable development (US-NRC, 2011).

The term “Sustainability” constantly appeared to be a UN substantive deliberation on SD since the 1987 Brundtland report. Historically, the SDGs (UN 2030 Agenda) took shape on decades of work by UN-based organisations and inputs from countries. The SDGs founded to emphasise poverty eradication and environmental protection. The decades of work on the SDGs was objectively planned and organised around Other significant occasions that influenced the SDGs include the Rio de Janeiro Earth Summit (June 1992), the United Nations Millennium Declaration (September 2000), the Johannesburg Proclamation and Strategy on Environmental Sustainability (South Africa), and the Rio+20 Symposium on Environmental Sustainability (2012), all of which took place in Rio de Janeiro, Brazil. On SD, 2015 was a transformative year. The State Legislature attempted to negotiate the post-2015 development priorities in January 2015. Besides decades and works done by UN-based organisations and their member countries, several major and significant agreements adopted to shape and globalised the SDGs.

1.2 Sustainability Ethics

From an ethical standpoint, sustainability refers to a moral way of acting, ideally habitual, in which an individual or group seeks to avoid adverse effects on the environmental, social, and economic domains while maintaining a harmonious relationship with those domains that support a flourishing life (Gomis, A.J.B., Parra, M.G., Hoffman, W. M., McNulty, R. E., 2011). Ethics underpins sustainability regardless of policy and law, governance and management tools, guidelines, and engineering methods. In this case, ethics encompasses other major philosophical schemes of ethics or code of conduct (behaviour). The people’s spectrum of ethics rationalises and justifies sustainability’s importance (Chen, Basil., 2012). Once grounded sustainability is understood, there is a need to identify, objectively define and confine the purpose of achieving sustainability. For example, why and what does it take to reach individual sustainability or group sustainability, firm or organisational Sustainability, a town or city’s Sustainability, particular ecological processes or ecosystem sustainability, a village or district sustainability, and a state or country’s sustainability.

1.3 Sustainability Science

The science behind sustainability is an essential characteristic of ethical principles in achieving and maintaining sustainability (Chen, Basil., 2012). Sustainability, the transdisciplinary science approach, is a guiding principle when operationalising the SD practice, which provides operating mechanisms for decision-making processes and implementation resulted from governance through goals approach (Saito, O. et al., 2017). Sustainability, evolving from traditional disciplinary-based science (descriptive-analytical and basic science) to a more inter-transdisciplinary approach, suggests and guides more scientific-oriented action to achieve and maintain Sustainability (Spangenberg, J.H., 2011).

The report from the National Science Foundation-funded The "Toward the Science of Sustainability Conference," which took place from November 29 to December 2, 2009, at the Airlie Center in Warrenton, Virginia, gave an outline of the future of environmental scientific research. The goal of scientific inquiry is to utilise technological and scientific advances to encourage the shift to sustainable development practises. The transition will be based on technological and scientific

advances but does not specify the large variety of issues that are sector-specific and resolves cross-sectoral challenges in disciplines ranging from clean power and manufacture to urban planning, agribusiness, and environmental assets. Rather, it concentrates upon the more limited but crucial task of defining the needs for basic research on basic concepts, methods, designs, and dimensions that, if effective, would make it possible to work on all of those sector specific application areas by progressing foundational knowledge in the field of sustainable development (Levin, S.A., and Clark, W. C., 2010).

1.4 Sustainability, a Global Common Cultural Norm

The United Cities and Local Governments (2018) argued that the implementation of the UN-SDGs 2030 should be localised to areas with distinct cultural characteristics. Culture is a way of life; it encompasses cultural practices, norms, and ways of life, affecting how individuals think and behave. It is critical to an individual's sense of identity and belonging to a group. It is necessary for social cohesion and self-sufficiency because it provides the social fabric that connects communities and families. Culture establishes a link between the interaction of ecological, economic, and social perspectives necessary for sustainable development. Individuals and communities require culture not only for their confidence, creativity, and happiness but also for their survival (UCLG, 2018). In addition, culture is critical for physical and mental health, environmentally conscious habits, as well as the established social security systems. All civilizations and civilizations have the capacity to help achieve sustainable growth, according to the Rio+20 result statement *The Society We Need*, which also "accepted the world's cultural and natural variety " (UN RIO+20, 2012).

Advocating, promoting, and disseminating principles, beliefs, behaviors, and creative solutions that help achieve the seventeen Sustainable Development Goals is more important than ever. A vision statement that emphasizes the importance of culture and faith in attaining sustainability can be built on this universal goal and a developing knowledge of religious consensus on normative sustainability. Furthermore, interfaith and intercultural dialogue can agree on a few fundamental principles, including the sacredness of nature and the rights of nature, which are shared by the majority of organised religions and indigenous peoples, as well as many natural scientists (UNEP, 2016). Hence, sustainability needs to become the people's global everyday cultural norm of ethics or standard that operationalised and practised in the daily decision making, implementation, monitoring, and evaluation. In addition, humans need to embrace sustainability as a new and contemporary culture to ensure the Earth is finitely livable in a sustainable way. Therefore, the term "sustainable," which is commonly used across a number of fields, ought to be a part of our everyday vocabulary. In this regard, sustainability science and ethics have to be adopted or replace some or major the old traditional ways of viewing and treating the environment at all levels of humanity's activities and dimensions.

1.5 Sustainability: Concept, Definition and Principles

The world community had adopted "Sustainable Development (SD)" since 1979. The First World Climate Conference (1979) organised by the World Meteorological Organization (WMO) on Climate Change science recognised and issued a declaration calling on world governments to anticipate and prevent potential human-made climate change. Subsequently, the SD was adopted in 1987, when Brundtland's report consolidated decades of SD (Brundtland Report, 1987). The SD was further endorsed in 1992 when the Rio Earth Summit brought the world together to take action and adopt Agenda 21 (UN, 1992). The urge for SD was further imposed when the precautionary principles adopted on 5th June 1992 in the Convention on Biological Diversity during the Earth Summit in Rio de Janeiro entered into force in 1993 (Cooney, R., 2004), the Kyoto Protocol in 1997 took the first step towards stopping the danger of global warming (UN, 1998). However, SD's understanding varies according to the people's cultural background, way of life, interest, expertise, and socio-economic status.

The Global Conservation Strategy defined sustainable development (SD) as preserving genetic variety, utilizing ecosystems and species sustainably, and sustaining critical ecosystem processes and life support systems in 1980. (IUCN, WWF and UNEP, 1980). Decades previously, the phrase "Sustainability" was used in the Brundtland Commission report (1987), "Our Common Future." In 1987,

the Global Environment and Development Commission launched a new paradigm for sustainable development (WCED) pursued to address the problem of conflicts between environment and development goals. Since then, the WCED in 1987 extensively used the new concept of SD. The WCED defined sustainable growth as "growth that satisfies present demands without compromising the capacity of future populations to satisfy their own requirements" (Brundtland Report, 1987). The new paradigm of SD identified and recognised the growing attention of "Economic", "Environment or Ecology", and "Social" as three essential aspects of SD.

1.5.1 Environmental Sustainability

Without humans, the natural environment is self-sustaining and self-regulating. The natural environment influx dynamically evolves and varies with space and time to regenerate (recover) and re-establish equilibrium repeatedly when something, usually natural, alters its current natural state (Kricher, John., 2009). Human-caused widespread disturbances impair the natural environment's ability to recover (biodiversity and its habitat or ecological structure), thereby impairing the natural environment's ability to self-sustain and regulate (Tripathi, R.S. and Khan, M.L., 2007). Environmental sustainability is critical for the sustainability of resource livelihoods over the long run. By itself, sustainable development can help to accomplish SDGs 1 and 2. A crucial element in environmental sustainability is to prevent the overexploitation of natural resource systems that are regenerative or of ecological environmental functions and services. preventing overexploitation and protecting environmental functions that are not normally categorized as commercial commodities, such as diversity, meteorological conditions, and others (Oliver, T. H. et al., 2015).

The term SD should embrace Ecological learning can be used to improve economic procedures. It incorporates the principles outlined in the Global Conservation Group and provides an environment justification for developmental claims that claim to raise the standard of living for humans (Redclift, M. 2005). Suppose that the SD mimics ecological processes where people are at the centre of ecological processes; therefore, the SD is a socio-ecological system in which economic development continues with renewable resources without environmental damage exceeding the ecological balance system (MacMillan, M.A., 1988). The SD's basic idea is simple; its inputs to the development process should be sustainable over time, given the resources such as trees, soil quality, water, and so on not declining (Markandya, A. and Pearce, D., 1988). SD is crucial to the continuity of human beings' biological survival by maintaining basic life support systems such as air, water, land, and biota. However, SD also means their quality of life beyond the biological aspect with the existence of infrastructures and organisations or institutions that govern, administers, manage, distribute and protect the components of these systems (Brown B.J., et al. 1988). The government and the conservation authorities must understand this simple phenomenon to develop appropriate policies and laws, regulations and management guidelines, and standard operating procedures for a better-informed decision.

1.5.2 Social Sustainability

The definition of SD, which appeared back in 1979, was developed when scientists define a society is considered sustainable if it adheres to the self-sustaining boundaries of its surroundings. The social dimension of sustainability, however, calls for the abolition of hardship and poverty (UNGA, 1987). The socioeconomic part of environmental improvement also implies the resilience of some aspects of life, such as food security, under stress. For example, agricultural sustainable growth is defined by the ability of suggested to operate in the soil, on the farmstead, states, or nations, through times of stress or strain (Conway, G. and Barbier E. 1988). A socially sustainable model must also provide equitable split and opportunities, adequate social needs and service delivery, such as education and healthcare, women's equality, and public leadership and involvement (Harris J.M., 2003). The sociological perspective of SD is a growth that has a good chance of eventually meeting human needs and enhancing the standard of human living (Benaim, A., Collins, A.C., Raftis, L., 2008). The human being on Earth is a growing society aware of its growth constraints and actively seeks alternative growth (Purvis, B., Mao, Y. & Robinson, D., 2019). In supporting social (well-being) sustainability, a consistent, effective, and responsible natural resource use policy that aims to maintain a constant adequate natural resource base overtime must be in place. This constant and

effective use implies the importance of resource assets, machineries, and strategy panels that maintain or ensure future generations' benefits.

1.5.3 Economic Sustainability

Some believe that SD does not demand preserving natural resources or any interrelation between humans and nature. Instead, they believe that the fundamental idea and concept the principle of sustainable states that current actions should not harm the chances of preserving and raising the level of life in the past (Repetto, R., 1986). The economic dimension of sustainability supports broadening the concept of development covering economic growth and social and cultural development while conserving ecological and ecosystem function and ensuring wise use of natural resources (UNGA, 1987). The Neoclassical Economics viewed SD. Principles as a pattern of social and organised economic reform (growth) that optimizes the social and financial benefits already present without jeopardising the likelihood that similar benefits will be forthcoming. The main goal of SD is to reach an acceptable (however defined) and equitably distributed level of economic well-being that prolonged for many human generations. Further, SD involves using non-renewable (exhaustible) mineral resources in a manner that does not overly prevent future generations from having easy access to them. SD also involves depleting non-renewable energy resources at a slow enough rate to ensure a high probability of an orderly transition of a society to renewable energy sources (Goodland, R., Ledec, G., 1987).

The concept of SD (economic), when respectively applied to developed and developing countries (Third World), may bring different impacts to different people. The SD of the Third World is concerned with the pressure on the expectation to increase the living standard of the poor at the grassroots level, which can be measured quantitatively in terms of increases in, for example, food, real income, education, health care, sanitation and water supplies, food supplies and cash. In general, the primary objective is to reduce the absolute poverty of the world's poor by providing sustainable and secure livelihoods that minimise resource depletion, environmental degradation, cultural disruption and social instability (Conway, G. and Barbier, E., 1988). As years go by, Economic Sustainability took shape and refers to the ability of a system to produce goods and services indefinitely, maintain appropriate levels of government and its liability, and avoid unnecessary sectoral imbalances that harm agricultural and industrial production (Vandergeten, E., Azadi, H., Teklemariam, D. *et al.* (2016).

1.6 Sustainable Engineering

Sustainability engineering, as an extension of ecology, includes "Ecological Engineering." Ecological engineering is a relatively new field with roots in ecology. It can be thought of as the process of designing or restoring ecosystems using ecological principles discovered over the last century. As a discipline within the biological sciences, ecology has a long history of development over the last century (Mitsch, W.J., 1996). Ecological engineering is defined as developing sustainable natural and artificial ecosystems that integrate human society and its natural environment to benefit both. Ecological engineering can be classified into four categories: the creation of ecosystems, the use of natural ecosystems for pollution abatement, most notably nonpoint source pollution abatement, and the restoration and use of ecosystems on an ecologically sound basis, a term that could also be used to refer to ecological management (Jørgensen, S.E., 2008).

Using resources not to harm the environment or deplete resources for future generations is known as sustainable engineering (UNESCO, 2012). Sustainable engineering necessitates an interdisciplinary approach in all engineering elements and should not be confined to environmental engineering alone. Sustainability should be incorporated into all engineering professions. Engineers demonstrate their social and environmental responsibilities to sustainably build societies by creating and maintaining physical infrastructures that help erase extreme poverty and hunger, achieve universal primary education, reduce child mortality, and improve maternal health. The creation of the Sustainable Development Goals allows engineers to continue playing a decisive role in sustainable (environmentally responsible) engineering techniques. Engineers' expertise will be required in the future to develop environmentally friendly technologies. The UNESCO Engineering Initiative (UEI)

collaborates with partners worldwide to develop engineering curricula that prioritise sustainability (UNESCO, 2012).

1.7 Sustainability Instrument

It is essential to fundamentally understand that SD emergence was triggered when the Earth's natural environment and resources were overexploited. When industrialisation began in the 1700s and became extensive, the natural resources oppositely started to deplete. Numerous natural resources, such as fossil fuels and coal, are non-renewable due to their formation over millions of years. Their extraction also causes environmental destruction. Hence, the SD strong emphasis is first, keeping healthy natural environments (ecosystem) for people to benefits from its function and services, and second utilise the ecosystem services for social and economic growth. Therefore, it is realistic to view that the environment is the fundamental element if there were discussions on SD.

1.7.1 *Convention on Biological Diversity*

The Convention on Biological Diversity (CBD), which 196 countries have ratified, is the primary international legal instrument governing biological diversity and sustainable use (UN, 1992a). In this case, SD means the sustainable use of the biological diversity components and the fair and equitable sharing of its benefits. Furthermore, SD related to biodiversity at all levels (ecosystems, species and genetic resources), including biotechnology, explained in the Cartagena Protocol on Biosafety (Kulkarni A., 2012). Hence, the SD also covers all possible domains directly or indirectly related to biodiversity and its association in development, ranging from science, politics, education, agriculture, business, culture and more. Therefore, SD prioritises protecting, preserving, conservation and wise use of biological diversity (CBD, 2003; CBD, 2013). In essence, environmental sustainability is the foundation of Sustainable Development.

1.8 Sustainability Policy, Laws, Regulations and Governance

Article 34 of the CBD is the primary international legal instrument and reference governing biological diversity and sustainable use (UN, 1992a). Departing from Article 34 of the CBD, governments of countries should, in their legal frameworks, develop comprehensive policy, laws, regulations and governance systems to support the United Nations' 17 SDGs to eradicate poverty and hunger, achieve justice and equality, and reverse biodiversity loss. The SDGs are the most ambitious targets for global sustainable development, demonstrating an appreciation for the importance of law and governance. Law and governance are critical components of resolving sustainability issues because they involve complex social, economic, and political processes and relationships. Therefore, it is necessary to have appropriate and well-implemented practical and effective legal frameworks and tools to achieve sustainability goals (Martin, P., Boer, B., & Slobodian, L., 2016).

The primary action to ensure environmental sustainability is to protect the natural environment of terrestrials and marines legally. Protected areas around the globe are legally established or have adequate means of protection and conservation. The Guidelines for Protected Areas Legislation issued by IUCN (Lausche, Barbara., 2011) encouraged principles with legal application on governance, management, sustainable development, ecological connectivity, buffer zones, climate change, alien and invasive species, zoning for particular purposes, and many more. In addition, the guidelines ensure that the ecosystem function and services derived from the protected areas are safeguarded and maintained to ensure that people living around the protected areas are indefinitely benefiting from the protected areas. Nevertheless, the law of protected areas, including Parks and other legally and effectively conserved areas, are confined to the area. The protected areas authorities practically have no jurisdiction outside the protected areas. Thus, operationalising the role of protected areas as the sustainable environment element within the local governance, management, administration, and day-to-day decision-making processes ensures district sustainability.

1.9 Sustainability Initiatives and Implementation

At the country level, along with 192 other world leaders, Malaysia, for example, adopted the 2030 Agenda for Sustainable Development in New York on 25th September 2015. The adoption is a global commitment to more sustainable, resilient, and inclusive development, encompassing 17 Sustainable Development Goals (SDGs), 169 targets, and more than 200 indicators across five (5)

dimensions: People, Planet, Prosperity, Peace, and Partnership. In fifteen years, the SDGs will catalyse action in critical areas for humanity and the planet. In response, Malaysia has developed its Phase 1:2016-2020 road map supporting the United Nations Sustainable Development Goals (EPU, 2015).

UN-SDGs has ambitious global targets set to restore degraded ecosystems, for example, 350 million ha of forest restoration by 2030 (CBD, 2019)). These may leverage the public health benefits of reduced Emerging Infectious Diseases (EID) risk to promote their uptake. Similarly, efforts to drive sustainable agricultural practices, reduce negative impacts of conventional agriculture practices on biodiversity, and improved ecosystem services provision could leverage the balance of food security needs for local communities and improve human, animal and ecosystem health. At the international level, all the UN-based organisations, initiatives and partnerships are continuously improving, enhancing, and strengthening policies, plans, action plans, and implementation, monitoring and evaluation to ensure UN-SDGs and global sustainability. In addition, the health component of human well-being has been addressed previously through multilateral environmental agreements such as the United Nations Convention to Combat Desertification (UNCCD), the United Nations Framework Convention on Climate Change (UNFCCC) and associated agreements, the Convention on Biological Diversity (CBD), and the Ramsar Convention on Wetlands.

1.9.1 Protected Areas

The total number of protected area records in the June 2021 release of the World Database on Protected Areas (WDPA) is 265,919, comprising 253,717 polygons and 12,202 points covering 245 countries and territories UNEP-WCMC (2021). Protected areas (PAs) is “A clearly defined geographical space, recognised, dedicated and managed, through legal or other effective means, to achieve the long-term conservation of nature with associated ecosystem services and cultural values” (Stolton, S., P. Shadie and N. Dudley, 2013). Protected areas are a critical component of global, national, and subnational conservation strategies. They are supported and governed by various local and national institutions, non-governmental organisations (NGOs), and even individuals, as is the case with privately protected areas. Globally, protected areas have a wide variety of nomenclature, management objectives, and management approaches. As a result, the IUCN developed a system of categorising protected areas according to the underlying management objectives, which can be achieved through a variety of management approaches. The categories system was established in large part to assist in standardising descriptions of what constitutes a protected area. Protected areas are essential to any global biodiversity conservation endeavour. Although governments recognise the importance of protected areas in combating biodiversity loss, they are frequently disregarded in economic growth and recovery plans and strategies. One reason for this is that data gaps make it difficult to establish protected area tourism’s far-reaching economic benefits, particularly in developing countries (*World Bank, 2021*).

1.10 Sustainability: Where and how to begin?

In essence, one must be aware of and understand what sustainable or sustainability means to design what operational practices needed to achieve them. The 5W+1H questions, a technique used to explore and identify the cause and effect (Jia C., Yan Cai, Yuen T.Y., Tse T.H., 2016), could help someone understand what grounded Sustainability (Gomis A.J.B., Parra M.G., Hoffman W. M., McNulty R. E., 2011). These questions are; **What** are we sustaining? **Where**, **Why**, and **Who** is sustaining? **How** the sustaining implemented, measured and justified that sustainability achieved?. In this case, understanding the meaning and knowing what it takes to be in a sustainable condition for a particular process, situation, or circumstance is key to maintaining sustainability. However, knowing the meaning of achieving sustainability does not translate humans’ living conditions into sustainability. Therefore, the SD need to be practically operationalised into day-to-day decision making and activities effectively at the local level.

2 OPERATIONALISING SUSTAINABLE DEVELOPMENT PRACTICE

The sustainable development practice must be operationalised to achieve sustainability. Any informed decision made must be underpinned by the fundamental principle of sustainability which is environmental stewardship. Hence, operationalising sustainable development practice begins with

ensuring the sustainability of the natural environment. Furthermore, the SD concept supports and maintains economic advancement and progress while prioritising safeguarding the environment's long-term value. Hence, despite the past scholars' argument that there should not be a trade-off between environmental sustainability and economic development, SD has innovated a sustainability framework to balance long-term environmental concern and ongoing economic need, achieve the SD's outcome or overall goal (Emas, R., 2015).

Environmental sustainability includes enhancing resource-based, which alone can ensure poverty alleviation (UNGA, 1987). Therefore, agents of change towards sustainable practices should pay attention to systematic approaches, feasible recommendations and creative solutions, and it must be operationalised into day-to-day socio-economic growth and development. Operationalising Sustainability is not limited to a structured approach to building a shared understanding of what needed to achieve sustainability. These include skills for framing complex problems, first-hand insight and research to emerging challenges, and increased cross-discipline integration. In addition, operationalising sustainability provides new integration opportunities for strategic planning and decision-making on day-to-day activities (Sroufe, Robert., 2016). The day to day down to Earth's decision-making process is happening at the local district level.

3 DISTRICT SUSTAINABILITY

District area authority governance and management are closer to local communities (UCLG, 2018). District governance and management guided by all the Policies and Laws of the Local Authority, and a Local Plan prepared for a particular district. The application of all the existing laws coordinated by the district office at the district level. However, sustainability issues and challenges remain. A study to identify the barriers to incorporating environmental sustainability concerns into construction procurement at the local government level in Ghana was carried out by Adjarko, H., Poku, G.O., Ayarkwa, J., (2014). In Ghana's western area, twenty-two (22) districts were studied, totaling nineteen (19). It was discovered that although the respondents are aware of how construction works affect the environment, they do not give these concerns top priority during the acquisition process. The study found that lack of gmp guidelines, a lack of industry understanding, stringent regulations, and contractors' desire for lower costs are the main external impediments to applying green sustainability issues into contractor selection. A further four important internal hurdles have been found by the investigation. These obstacles include a lack of a plan or approach, a lack of expertise, inefficient procedures, and a failure to comprehend how to include environmental concerns in agreements. The study suggested that the government review existing procurement methods to establish a roadmap for incorporating environmental sustainability concerns. The study raised awareness about the critical nature of developing a strategy for promoting environmental sustainability through public procurement management (Adjarko, H., Poku, G.O., Ayarkwa, J., (2014). This case study implies that many aspects of socio-economic development at the local district level require adopting sustainable development practices for better and enhanced sustainability.

3.1 Boundary/ Scope/ Delimitation

The first essential question to determine where and how to begin is what and who need to achieve sustainability. How a particular sustainability condition achieved requires a set of an adopted general definitions of sustainability tallied to the expected condition or state of sustainability. The sustainability in isolation by individuals, groups, organisations, and business entities does not represent sustainable development advocated by UN-SGDs (2015-2030). A state of sustainability has to be an accumulative and outcome of the operationalised sustainable development practices by all walks of life and sectors. The sustainability condition symbiotically benefits all and satisfies the 17 SDGs and 169 targets. Hence, implementing and achieving 17 Goals and 169 targets of the UN-SDGs must be a collective effort by groups of people living and continuously sharing the same space and time daily doing different socio-economic development activities and contributing to one or more implementation and operationalisation of the UN-SDGs-based day to day informed decision. This daily shared space and time is commonly known as a "district area", which geographically defined area that centralises local governance for the district's socio-economic development. District area is also, by default, an "area-

based conservation” and a “defined area of the socio-ecological system”. Hence, by default, a district area existing boundary is the delimitation or scope of sustainability for a particular district.

The district (and its population) sustainability is more critical than personal sustainability because it encompasses and supports all individuals living in the district where activities are interrelated and interdependent. Therefore, sustainability has to engulf all components of life-related to the aspect of social, economic, and environment where an individual lives. The district’s sustainability relies on the district’s rightsholders and stakeholders’ ethical operationalisation of SD practices that guide the informed decision’s implementation, monitoring, and evaluation (Hustedt, C. & Hallensleben, S., 2020). Sustainability is the outcome of continuously operationalised sustainable development practice. However, conserving the natural environment (biodiversity and ecosystems structures) is the fundamental ingredient of sustainability. Therefore, the operationalisation of Sustainable Development Practices under any circumstances and at all the processes stages must firmly consider the environment’s well-being. The science of sustainability, by now, is well understood, and that sustainability’s priority is about the well-being of human and human/ people-centric and this priority essentially underpinned by the functioning natural environment and ecosystem structure.

3.1.1 District Area is default of Socio-ecological system

A “Social economic Systems” is also the usual definition of a local area ecosystem. A socio-ecological framework is an intricate application system made up of two major subsites: natural biology and humans social and economic life on only one side. They are networks because they are made from interconnected parts that cooperate to accomplish a single objective. They are complicated because they usually have a large number of parts that function together in a nonlinear connected approach. Socio-ecological systems display considerable coevolution over time because they are adaptable in the sense that operating systems alter their states in reaction to the states of others. Socio-ecological structures are complicated and have many different aspects. These programs operate at several various qualitative levels, ranging from fundamental geological processes to numerous ecological and biological procedures that communicate with technology, financial, and social processes. On all sizes, from a person to an agricultural field to a metro region to a nation-state to the worldwide economy and the supporting biosphere, socio-ecological programs operate (Partelow, S., 2018).

A district area was once an area of a naturally functioning environment (ecosystem structure and processes) that conforms to the natural ecosystem’s science. However, the arrival of humans gradually altered the past natural ecosystem, which gave birth to the science of socio-ecological systems (Young, O.R. et al., 2006). Therefore, a district area is an ecosystem or ecological system that evolved from natural-ecological to a part of a fully socio-ecological system or fully economically developed districts, towns, cities and megacities. Hence, district sustainability, obviously area-based sustainability, which is also the default of being a conservation area, is a geographically defined area where some form or condition of ecosystem or ecological system exist, creating a life-supporting system and balancing the socio-economic and natural environmental need.

3.2 Theoretical and Conceptual Frameworks

A district area governed, managed, and administered by two sets of an institutional framework called “District Office” doing district governance and administrative works, and the Local Authority (Local Government) focusing on the urbanised and rating area under the purview of District Council or Municipality (DC/M). The DC/M is usually governing and managing an urbanised area rated for rapid economic development, and a District Office is coordinating rural area development activities and administering the well-being of people living within a particular district. Depending on the size of the urbanised area within a district, this urbanised area can be called either “town”, “city”, megacity, or metropolitan (Atkinson, Doreen., 2002). These areas are dominated mainly by socio-economic activities and hardly have any ecological system.

Globally, it is now the way forward to simultaneously maintain a higher degree as possible the crucial function of the natural ecosystem. The maintenance involves designing and operationalising the SD practice to provide an opportunity for individual or group socio-economic sustainability while maintaining a large or landscape of ecosystem that allows sustainable natural resources for a larger society. A responsible use in this context is defined as “the use of the elements that make up

biological variety in a manner and at a pace which does not contribute to the long-term decrease of bio diversity, so maintaining its capacity to satisfy the requirements and ambitions of future generations." (CBD, 2008; UCLG, 2018)

District sustainability allows individuals or groups to interact and establish support within a common sustainability platform. For example, while the higher-income group could afford a luxury car to enjoy what the city offers, a sound and sustainable public transportation system similarly allow the lower economic income group to enjoy the same (Tirachini, Alejandro., 2020). Attaining and maintaining district sustainability requires a continuous practice of SD implementation and operationalisation. This continuous practice is critical because it ensures that current generations' needs and aspirations met without jeopardising the ability of the future to meet their own need (CBD, 2008).

3.3 Local Agenda 21

When LA21 was adopted at the Earth Summit in 1992, it was intended to be a "global programme of action for sustainable development." The LA21 aimed to be "a comprehensive blueprint for global action to be taken in the twenty-first century." The ambition was lofty, as were the agenda's stated goals: raising the living standards of the poor, better managing and protecting the environment, and ensuring a more prosperous future for all. However, according to a review of Agenda 21, and the implementation of the Rio Principles (Le Blanc, D., Dodds, F., Schneeberger, K., and Ullah, F., 2012), success has been highly variable. Although the SDGs are a comprehensive strategy for achieving sustainable development, their implementation has not always been systemic. Hence, there are numerous instances where Agenda 21 has resulted in positive and long-lasting changes, Setting higher standards for what is feasible in terms of lasting change, industry by area, for example for instance, Agenda 21 has improved our comprehension of how biodiversity affects growth, how agriculture contributes to it, and how indigenous peoples integrate into modern society (Le Blanc, D., Dodds, F., Schneeberger, K. and Ullah, F., 2012).

The UCLG (2018) recognised localised governance and administration to enable democracy and close participation from the public and local communities living within a district. The fifteenth (15) Routes to translate the SDGs Inspirations from Communities Taking Local Actions Helping to Global Goals were unveiled at the same time by ICLEI - Municipal Authorities for Sustainability. Each route offers a foundation for the implementation of groups of connected SDGs. Yet, because it depends on unique local realities, there is no "one fits all" strategy to translating the SDGs. Nonetheless, every step has been taken is a positive one because local action is the basis for the planet's sustainable society (Schuthof, R., Kuhn, S., Morrow, R., Kotler, A., 2019). Thus, the way forward is to localise the SDGs 2030 implementation for optimal results.

3.4 District Environment Sustainability

3.4.1 *The Role of Parks, Protected, and Conserved Areas (PPCAs)*

Protected areas, including Parks, Forest and Marine Reserves, and Conserved Areas, are globally recognised as the foundation of global environmental sustainability. The Parks, Protected, and Conserved Areas (PPCAs) have their own best practices and guidelines of governance and management systems established, recommended, and recognised by either IUCN or UN-based organisations such as UNESCO, UNEP, UNDP, and World Bank. These governance and management systems have in common the "sustainable development" element and encourage the benefits of PPCAs to the indigenous and local communities living within and around before the public at large. However, these PPCAs boundaries confined to environmental sustainability and minimal socio-economic activities. Thus, the PPCAs separate themselves from being heavily attached to socio-economic growth to balance the local level.

The alienation of PPCAs and the implementation of initiatives to repair habitats, build pathways, or otherwise transform the environment, includes adjustments to the interaction between humans, animals, and animals that may increase or decrease the onset of disease (IPBES, 2020a). Programs to detect disease incidence and the possibility for the creation of novel viruses could be a part of such alienating attempts. The neighborhood could replicate the nature reserve policies, such as "marble tiled" tactics that promote juxtaposing agricultural and preservation areas, green corridors to

improve wildlife motion, arrangements for land use that permit continued to increase human behavior in or close nature reserves, and others, as part of area-based preservation (IPBES, 2020a). Enforcement of laws and regulations that avoid human encroachment would also reduce disease risk.

Given the ongoing rise of urban sprawl, human habitation, farming land, high-speed rail links, air transport, and maritime commerce, operationalizing the function of PPCAs in local district decision-making is a primary concern (IPBES, 2020b). The PPCAs (ecosystem services) are vital for the survival of people living within the district. It is also important to acknowledge that PPCAs help reduce the risk of disease emergence that could cause pandemics. District conservation efforts (efforts to mitigate pandemic risk) collectively assist a state/country in balancing the promises that developing nations have made to their economies, the nutritional needs of indigenous peoples and local communities who depend on natural food supplies, the requirement to preserve, restore, or use diversity responsibly, and the need to safeguard global health (IPBES, 2020b). Greater understanding of the financial advantages of more environmentally friendly consumerism and agricultural production may serve as an additional incentive for a shift toward agriculture that prioritises ecosystem service provision while meeting the food security needs of local groups and promoting human, animal, and ecosystem healthiness (IPBES, 2020b).

3.4.2 Nature-based Solution: Climate Change mitigation and Disaster Risk Reduction

The fundamental of SD is the protection and conservation of the environment. Hence, the role of PPCAs is an essential component of a district development plan and activities. First, the necessary protection and conservation areas should be identified and protected, followed by planning for the socio-economic development that ensures the well-being of people are sustainably planned while maintaining the ecosystems function and services. The PPCAs' natural ecosystems are critical for mitigating and adapting to climate change. They are critical components of the global carbon cycle because they capture carbon dioxide from the atmosphere and sequester it in vegetation and soils. PPCAs are one of the most effective policy tools for protecting biodiversity from various threats, including providing a home for species migrating due to climate change (Seddon, N. et al., 2019).

3.5 District Social-economic Sustainability

Social sustainability depends on the sustainability of the economic and natural environment. Addressing sustainability issue and challenges are practically possible at the right platform or a system where key stakeholders and the affected people who were responsible for loss and degradation are at the same time turned into agents of a solution given the right approach. The right platform or system strengthens relationships and cooperation amongst parties trying to protect and conserve nature and the socio-economically affected people and local communities. This kind of platform or system is what the United Cities and Local Government (2018) advocated, where the best and practical way to achieve sustainability is where people are closely engaged, which is at the local level.

The operationalised system to achieve sustainability where issues and solutions established to reduce constraints, increase the agreeable terms between parties, and better understand and adapt the fast-changing incorporates PESTEL (Political, Economic, Social, Technological, Environmental, and Legislation). The system better understands and enhanced critics and disagreement, convince, or address their differences. In addition, it will allow organisations to let stakeholders know that they are keeping up with current issues, and in some cases, it will be essential in solving problems. Because it takes time, money, and effort to develop and maintain, it is justifiable from an economic perspective (Jeffrey, N., 2009). The system (SD Practice) could include an informed decision-making process that uses a comprehensive analysis of socio-economic development through a political, economic, social, technology, legal and environmental (PESTLE). The analysis identifies the risks with multiple stakeholders involved at all stages, from the design's conceptualisation right through to implementation. The sustainability system best include the immediate solution of societies concerns, early warning and mitigation of disasters risks providing that particular stakeholder involved at the correct stage of engagements and consultation (Kolios, A. and Read, G., 2013).

3.6 District Sustainable Tourism: Most Sustainable Friendly Industry

Tourism is synonymous with sustainability, and its expansion linked inextricably to ensuring and maintaining sustainability (environment, social and economic). The Local Government role in sustainable development through sustainable tourism is crucial (Gorica, K., Kripa, D., and Zenelaj, E., 2012). The tourism industry is well-known for its socio-economic sustainability, as evidenced by numerous tourist destinations and millions of arrivals worldwide. The most preferred are the nature-based tourism destinations which most districts have at least one place of interest. Moreover, tourism is an essential driver of economic growth globally and locally. For example, in OECD (Organisation for Economic Co-operation and Development/ a group of 37) countries, the industry contributes directly to 21.5% of national output, 6.9% of employment, and 4.4% of GDP; on aggregate, ongoing growth offers genuine opportunities for inclusive and sustainable development. But, comprehensive and forward-looking policies are required to make sure that this expansion more effectively benefits people, communities, and enterprises. As a consequence, travel will surpass long-term growth forecasts globally in 2019, with 1.5 billion foreign visitors expected to arrive. After years of rapid growth, global mass tourism to OECD nations overtook it after 2014. The OECD countries rank among the top nations for tourism, hosting more than half (56.9%) of all visitor travellers and traveling expenditures (61.1 per cent). In addition to the advantages of international travel, the majority of OECD countries rely heavily on domestic travel, with citizens spending over 75% of all travel-related expenses (OECD, 2020).

4 DISTRICT SUSTAINABILITY ISSUES AND CHALLENGES


The seventeen (17) United Nation's SDGs are goals of the Global Communities ratified by 193 UN member countries and achieved by 2030 (UN-SDG, 2015). However, the SDG 2020 report concluded that the state or condition of being sustainably developed appears to be far from achievement and success (UN-SDG, 2020, Report). The successes and accumulative achievement of the SDGs by a UN member country is the responsibility of government sectors and all sectors of society and economy. The concept of "sustainability." Despite the decades of the long history of conserving the natural ecosystem by establishing parks, protected and conserved areas, issues and challenges in biodiversity loss, land degradation, and environmental deterioration persist (IPBES, 2018). Operationalisation of SD. Practice (SDP) at the district level is a practical approach to achieving SDGs as the District Area has its existing governance, management, and administrative structure. The three-pillar of SD is already in some manner a day-to-day business of the District Office or Local authority.

Achieving sustainability by implementing SD practices seems extremely difficult because humans' behaviour is complex and unpredictable in many ways. These humans nature of behaviour raise issues and problems for them to live a sustainable, balanced and harmonious life. Hence, there is a need to understand why human nature, cognition, and denial blocking Sustainability (Rees, W.E., 2010). In the past decades, scientists had issued a public statement of warning and describing humans nature that requires a significant change in how they treat the Earth. Humans' nature and wretchedness need synergy (regulated and directed to a shared understanding and order) to maintain the Earth's natural functions and ecosystems' ability to sustain future generations (Rees, W.E., 2010).

4.1 Population Growth

Guney (2017), in his study, stated that the increasing growth of the population negatively affects sustainable development. His calculations, which used Modified Least Square method and an instrumental variable, examined data from 146 nations from 1990 to 2012. According to the research, a higher population growth rate results in less sustainable development overall. The population explosion rate of 0-14 years has a substantial negative effect on sustainable development, while population growth rates of 15 and up may not have a significant impact. Yet, depending on the level of prosperity of the nations, the effect of population increase on environmental sustainability differs. The population growth rate in developing countries negatively affects sustainable development, while the population growth rate in developed countries positively affects sustainable development (Guney, Taner., 2017).

The World Population Prospects (WPP) projected that global population growth would reach 7.7 billion in 2019. The projection further estimated an increase of population into 8.5 billion in 2030, and respectively 9.7 billion and 10.9 billion, in the year 2050 and year 2100 (UN-DESA, 2019). The



country's population, which is determined by the amount of potential reproductively viable in the second decade of the century as a result of the vigorous promotion of modern contraceptives, particularly in Africa, which is essential to the stabilization of the inhabitants, will have a significant impact on the range of believable population locations in the long term. Almost all types of growth will occur in low-emission and low-consumption developing countries. Consequently, food production and water consumption extensively increasing, and population growth rather than dietary changes will drive future food demand. Effects are anticipated to result from the destruction of natural habitats and diversity, the over-exploitation of ecological systems, and the removal of groundwater (Cleland J. (2013).

4.2 Urbanisation


According to the Population Reference bureau of the UN Department of Social and Economic Affairs, 55.3% of the world's population is thought to reside in urban areas (UN-DESA-PD, 2018). 60% of the world's largest population is projected to live in urban regions by 2030, with one in three individuals residing in towns with a population of at least 500,000. Yet, metropolitan areas only make up roughly 2% to 3% of the planet's land surface, where more than half of the worldwide people resides (Hemakumara, GPTS., and Rainis, R., 2018). A city, usually the centre of the socio-economic activities of a district area, has traditionally been socio-economic, learning, culture, and innovation centres. Urban nations are typically wealthy and highly developed. Many cities are working to reduce poverty, improve infrastructure, and curb pollution. However, and observably, rapid and ill-regulated urbanisation is wreaking havoc on the environment in developing countries. Due to poor sanitation, water shortages drainage, ineffective residential and commercial waste management, and air quality, living circumstances have gotten worse as a result of urbanization, as has the number of people suffering from serious health issues. The rapid rise in the conversion of low-lying terrain has other problems, like too much waste from households and not enough processing capability. It is essential to carry out the Sustainable Development Goals of the 2030 Agenda, particularly Sustainability Goal 11, to guarantee that cities and human habitation are democratic, secure, robust, and ecological as the current major trends in urbanisation are anticipated to intensify over the next decades (UN-DESA-PD, 2018). Urbanisation has a more significant impact when it is unplanned. The governance and management is the responsibility of the local authority where the urbanisation is happening. Hence, its policy-makers will have to deal with and implement sustainable development (Palanivel, T., 2017).

4.3 Human Settlement

The rapid emergence of housing on the periphery or outskirts of emerging countries, particularly in South Asia, has led to an increase in these regions' adverse environmental impacts (Hemakumara, GPTS, and Rainis, R. (2018). People who raise issues and cause problems typically influence their surroundings through attitudes, ethics, values, norms, authority, influence, enticement, coercion, or genetics (Golledge, R.G. and Stimson, R.J., 1997). Behaviors can range widely; some are common, some are unique, some are acceptable, and some are appropriate outside of the norm. Household conduct hence refers to a household's collective thought, which can vary and be either beneficial or detrimental (Hoogvorst, A., 2003). Social behaviors are actions that is done with other people in mind. Several types of social control are employed to impose social norms and determine if a behavior is okay (Fehr, E. and Fischbacher, U., 2004). Thus, there is a need to regulate human behaviour under the ethics and principle of sustainability and informed decision-making to ensure SD continue and maintained.

4.4 Environmental Degradation

Urbanisation degrades the natural environment. Nevertheless, even the Parks, Protected and Conserved Areas faces sustainability issues and challenges. A study by Chakraborty, A. (2019) examines the complex challenges of environmental sustainability in mountain destinations using the North Japan Mountains' Shiromadake Area as a test case. The Shiromadake District is well-known for its picturesque peaks, like as Mount Shirouma, fluffy winter snow, and an extensive variety of alpine wildflowers in summertime. The region has a long history of human settlement and travel, and the impact of its rise to popularity as one of Japan's most well-known mountain resorts can be seen clearly



in the terrain. A broad current warming and shifting winter weather pose a hazard to this region. Stakeholders are well aware of the threat that climate change poses to their livelihoods, but little is known about how human segmentation of the geo-ecological connection has evolved over time. Conventional management techniques prioritise stabilising important geomorphic activities that have permanently shaped the ecosystem, at least since the Pleistocene glacial period; yet, these human behaviour reduce the site's efforts. In order to acquire important insight into the area's intricate interconnections between physicochemical (geological, geomorphic, and ecological) and social (mainly tourist) features, Chakraborty used a qualitative approach that utilized interviews and content analysis. The paper recommends data assimilation economic activities like large-scale tourism to lessen the environmental influence and says that comprehending the past and important natural change routes is vital for the long-term health of mountainous locations (Chakraborty, A., 2019). Global warming and the effects of catastrophes around the world are made worse by biodiversity loss.

4.5 Pandemic Covid-19

The Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES), established in 2012, concluded in its recent workshop executive summary produced at a critical juncture in the course of the Covid-19 pandemic recognising long-term societal and economic impacts (IPBES, 2020). The Covid-19 pandemic pushed people from all walks of life and sectors of society to look for long-term preventive solutions beyond the norm. Significant evaluation and changes in the relationship between people and nature is necessary to mitigate global environmental changes caused by unsustainable utilisation and consumption, which lead to the loss of biodiversity, degradation of the natural environment, climate change, and the emergence of new diseases. When dealing with a pandemic, the current approach is reactive, identifying diseases early, containing them, and developing vaccines and medications to manage them. On Covid-19, with over a million deaths and severe economic impacts, the reactive approach is inadequate. The Covid-19 impact has cost trillions of dollars. This impact worsens if no prevention action of future diseases' rising tide (IPBES, 2020). Initiative at the local District level in increasing or ensuring sustainability and reducing pandemic risk due to land-use change and agricultural expansion is much more effective to prevent long-run risks and economic costs reduction arising from future pandemics.

5 DISCUSSION

Many non-believers in a scientifically informed approach to global development imply disadvantages for people and weaken the possibility of maintaining a complex global civilisation. Nevertheless, significant evidence shows that national governments, the United Nations, or other official international organisations are seriously contemplating the implications advocated by the scientists in the form of warnings, urges, and evolving policy responses needed to continuously restructures humanity's concern of the deteriorating health of the Earth (Rees, W.E., 2010). The paradox is that our instinctive, biological propensity to grow (which we share with every other species) has changed from being appropriate to being detrimental. The two opposite directions of safeguarding the Earth and advancing civilisation put the Earth's physical environment at risk. Achieving sustainability means rewriting the old culture and norm to a new cultural narrative norm designed for living on a finite planet. This new culture (sustainable livelihood and development) must override current destructive human nature and culture (Rees W. E., 2010).

The environmental component of sustainable development involves safeguarding and conserving the environment's biodiversity and ecosystem function to guarantee continuing to provide ecological services Although though the idea of ecosystem services (ES) is becoming more popular in policies and strategy, its practical effects are rarely mentioned. A group of scholars, J. Dick, F. Turkelboom, and colleagues (2018), compiled a report on practitioners' perspectives on the ES concept's practical implementation in 27 case studies. Their study (n = 246) used a standardised anonymous survey to examine the process of science-practice interaction, perceived impact, and anticipated use of case study assessments. According to the report, operationalising the concept resulted in a gradual shift in practices: 40% of case studies predicted a transformation as a consequence of their efforts, and 13% of them indicated an improvement in action (such as leadership or policy shift). The influence was mostly attributed (>70%) to a process of effective science-practice

connection. The approach's main advantages were said to include greater conceptual understanding and communications, increased engagement and collaboration, creation of thorough science-based information, and knowledge that was geographically referenced for future planning (91 per cent indicated they had acquired new knowledge). The restrictions mainly related to individual cases and were caused by issues with the approach, the data, and the execution. The study highlighted the vital significance of interaction, participation, and collaboration among diverse stakeholders in implementing the ES concept and further democratising natural resource and landscape planning (Dick, J., Turkelboom, F. et al., 2018).

In general, “how-to” practices-based studies are an organisation’s generalised framework of engagement and collaborative learning to operationalise sustainability. Hence, a phased approach to include cross-disciplinary consideration and engagement is necessary to understand complex and real-world challenges of achieving and maintaining Sustainability (Sroufe, Robert., 2016). The appropriate and manageable scale is at the district area level. Given the economic status of the respective countries, it is near impossible to achieve sustainability on a global scale. Moreover, at the country level, socio-economic development activities are not happening everywhere across a country. Usually, socio-economic development activities concentrated around where the resources are available and people are living. For example, an arable land area with good road access has a higher population. Therefore, socio-economic development activities in the same area are active and extensive. More often, the same area will eventually be environmentally (biodiversity and ecosystem) degraded. The SDGs is a way forward at the local district level.

Environmental stewardship is a “Nature-Based Response” to disasters. Nature-based solutions rely on ecosystems to address global issues such as climate change. In fact, the ability to address these issues depends on the health of the ecosystems and the efficiency of the upland, marine, and coastal habitats. Strong, robust, productive, and varied environments will therefore enable us to create solutions that help our communities and total biodiversity in the context of worldwide warming (IUCN, 2016; 2020). Disasters are seriously affecting the local communities. For example, in Sabah, Malaysia, many districts (e.g. Beaufort, Penampang, Kota Belud, Kota Marudu), to some degree, are severely affected by flooding during the rainy season. However, degradation of the environment continues implying the awareness of the role of the natural environment as the nature-based solution (flood control) is low or perhaps taken for granted.

The natural environment is also a “Natural Capital”. The International Financial Corporation (2020) defined the world’s natural resource stocks as “natural capital,” The diverse ecosystem it supports annually generates \$44 trillion in economic value for businesses and economies. Nonetheless, the enormous worth of this capital assets has been overlooked and is mostly invisible to decision-makers in the commercial sector. The neglect has reduced nature’s capacity to offer the ecosystem services that are essential to both society and business. Commerce, economics, and civilization are all clearly threatened by nature’s ongoing decline, which is being exacerbated by irresponsible consumption and production patterns, population trends, rainforest, and land-use change. The ways that businesses gauge, value, relate to, and account for how nature and humans interact must change quickly. Adding Natural Capital accounting means the cost of addressing the disaster will be borne by nature in the long term when we allow nature to return. By developing markets (IFC, 2020).

The importance of PPCAs as area-based conservation for local well-being and sustainable development has been recognised by the world’s when the global network of protected areas has grown exponentially over the last 25 years, particularly in developing countries with extraordinary biodiversity. Simultaneously, the mission of protected areas has shifted from biodiversity conservation to human welfare improvement. Over the years, there have been paradigm shifts toward protected areas that allow for local resource use. Measuring effectiveness is challenging in many protected areas due to their multiple functions. Our analysis of 49 tropical nature reserves shows that parks are typically successful at stopping destruction inside their limits. However, deforestation in the immediate vicinity is isolating protected areas. Numerous initiatives now seek to connect protected areas to socio-economic development on a local level. Even though some initiatives have been successful, overall expectations regarding the capacity of protected areas to alleviate poverty should be tempered. Additionally, the broader policy context of biodiversity loss, poverty, and unsustainable

land use in developing countries must be addressed (Naughton-Treves, L., Holland, M.B., Brandon K., 2005).

6 CONCLUSION

The district system, which is the central administration of social and economic development, has been in existence around the globe for several hundreds of years. District area, as described earlier, is area-based governance and management, which has a strategic system that allows closer socio-economic interaction with local communities. This advantage enables immediate implementation and monitoring of the 17 UN-SDGs and its 169 targets. It is much easier to address issues and challenges faced by authority as it is much convenient, efficient, and cost-effective for the stakeholders to participate or contribute.

Operationalising the PPCAs into the district SD practice will immediately become a work in progress to ensure environmental sustainability ahead of socio-economic sustainability. In addition, operationalising sustainability science, ethics, culture, and engineering on socio-economic development activities within areas other than protection and conservation areas or zones will subsequently position the district into contributing to SDGs 2030 tracts.

The UN-SDGs (2015-2030), as urged by the UCLG (2018), should be implemented at the local level to ensure progress is closely monitored and evaluated. The implementation intention is to solve the unsustainable practices happening at the very root cause to achieve the overall outcome of the UN-SDGs at the country and global level. District area, as area-based conservation, in which all the types of biodiversity conservation initiatives are present and combined with sustainable socio-economic development will drive the SDGs achievement to success. Furthermore, Operationalising the sustainable development practice at the local district level contributes to UN initiatives of climate change [reduce emissions from deforestation and forest degradation (REDD)] and control and minimising disaster risks such as flooding [Disaster Risk Reduction (DRR)].

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