BIBLE, ECOLOGY AND SUSTAINABLE DEVELOPMENT: A READING OF GENESIS 1:1-2:4A

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Abstract
This paper explores how Gen. 1:1-2:4a reflects the concept of sustainable development (SD) and posits symbols for addressing ecological crisis: symbols that can be used to inform our belief systems. This investigation is imperative in the face of the integrated effort in finding solutions to ecological and environmental difficulties. Its rationale, therefore, is to demonstrate that the Bible can equally engage in the discourse on SD. It, indeed, has something to offer in the quest for solutions to ecological crisis. In this respect, there is the need for exploratory studies aimed at investigating the prospects for positive interface between the Bible and ecology, toward pragmatic response to ecological crisis.

Introduction
The term ‘sustainable development’ is the catchphrase in current discourse on holistic development. According to S. M. Lélé, “Sustainable development (SD) has become pervasive. SD has become the watchword for international aid agencies, the jargon of development partners, the theme of conferences and learned papers, and the slogan of developmental and environmental activists”.¹ This pervasiveness is an acknowledgement of the reality of the many crises the world faces; a prominent one being the ecological crisis. Today, there is increasing acknowledgement that the quality of the environment, especially the ecological aspect, has drastically reduced, so much so that the situation needs immediate attention. It is also admitted that the crises the world faces and the ecological crisis in particular, are convoluted.

The complexity of the ecological crisis, therefore, demands an integrated and interdisciplinary effort in dealing with it. The Bible, in this respect, cannot be left out in the search for a solution. This is more so in
Africa where many people read the Bible and make it part of their life. As Sullivan posits, “Human belief and practice mark the earth. One cannot think of a natural system that has not been considerably altered, for better or worse, by human culture.” Again, Christianity is deemed to be playing a prominent role in the thinking of humanity; a thinking that nurtured the irresponsible attitude of humanity towards the earth.

This paper is structured as follows; first is the reading of Gen 1:1-2:4a. This reading is literary in approach, with the focus on the text as a narrative. Secondly, the study explores the relationship between the ecological crisis and SD. This provides the framework for discussions on the interface between the Bible and the ecological crisis. Third is a reflection on the interface between the text and SD for ecological solution.

The Text: Gen. 1:1-2:4a
Gen. 1

The narrative states that in the beginning God created the heavens and the earth (v.1). The pair of words haššamayim and ha’arets (the heavens and the earth) point to a sense of completeness of what has been created. The earth, however, is in the state of tobhu wabhohu (a confused, unordered, formless chaos) (v.2). Also, darkness encompassed the face of the waters. These descriptions by the narrator inject suspense into the narrative. A chaotic state existed at that moment of creation. It was in that state that the spirit of God hovered over the face of the waters like an inspection underway (v.2).

The narrator makes his protagonist, God, suddenly speak (v.3). God’s speech slows the story and allows readers the opportunity to gain greater insight into the events to unfold. The speech is sudden but in a forceful tone which seeks to address the chaos described earlier. God gives a definite, concrete command which transforms speech into reality in a manner in which speech and deed become spontaneous. The first element to be created in the state of tobhu wabhohu was light (v.3). God saw the light as good. Light was separated from darkness. Darkness received no assessment particularly at this juncture. It is not indicated explicitly how it was created. God then named the light day and darkness night, which completed the first day of creation.
The structured order with which God created light is replicated in the creation of other creatures. The next to follow the creation of light was the firmament, on the second day (v.6-8). The creation of the sea, earth and plant life came next on the third day (v.9-13). The sun, moon, and stars took their turns on the fourth day (v.14-19). The fifth day saw the creation of all living creatures that fly and those that live in water (v.20-23).

The narrative can be described as a concentric progressive one. God spoke entities into being, assessed them, undertook some form of arrangement on the created entities, and named them. A temporal framework was in this process superimposed on the act of creation, revealing the systematic and orderly progression of God’s coordinated actions. Though these actions were repeated in the creation of different entities, the narratives indicate they were purposeful. Obviously, the narrator was very much interested in the order with which God carried out creation.

One clause which persistently features and points to the structural significance of the narrative is *ki tobh* (for it is good). It appears six times in this exact form (Gen. 1:4; 10; 12; 18; 21; 25) and once in v. 31 in the modified form, *tobh me’od* (very good). Not all creatures receive this divine assessment. The creation of the firmament, for instance, does not receive the *ki tobh* assessment. *Ki tobh* portrays an active evaluation by God of his creation. Westermann explains how “a craftsman has completed a work, he looks at it and finds that it is a success or judges that it is good”.

This judgement of God represents a divine assessment and bears a stamp of authority. This indicates the meticulous nature of God and points to the inherent goodness of what he has created.

To a greater extent, God’s creative action is predictive. This prediction in no way suggests a monotonous repetitive action. On the contrary, it is a lively repetition which reveals the inherent similarity and connectivity which is linked through nature. Again it reveals a plan of action by the creator, carried out in an orderly and meticulous manner, which, at the same time, reveals a purposeful end.

In v.22, the dynamism of God’s creation is evident in the blessings the creatures of the fifth day received. These creatures are distinct from the
other creations of the preceding days on the basis that they are *nefes khayyah* (living creatures). They are to be fruitful and multiply as well as fill the waters and the seas. It is significant to note that God speaks this blessing in the imperative mode which carries the “power of fertility”.

The sixth day set itself apart from the other days by way of the narrated time. Its extensive nature calls for attention to the events to transpire. The first action was the creation of *nefes khayyah* (living beings) with the earth as their abode (v.24). Once again, the Lord was content with what he created (v.25). The next action was the creation of humans. The dynamism in the narrative is again evoked here. First, the clause “then God said” which opens v.26 is followed by a cohortative. This uniqueness is evident in the pluralistic context of God’s decision. Until v.26, God carried out creation singularly. The second distinctive feature is the decision to create humans in *betsalmenu kidmutenu* (in our image as our likeness). This phrase puts into perspective the purpose in creating humanity and strikes a connection between God and humanity. The word *tselem* is repeated to emphasize this connection (v.27). Significantly, the overt identification of male and female, during the creation of human beings, indicates the equality of both sexes (v.27). Like all *nefes khayyah* they are blessed with the power of fertility (v.28). Humanity and the other living creatures share this blessing of fertility in a strange correlation which manifests their unique stance in creation.

The events on the sixth day have not ended. Apart from the above peculiarities concerned with the creation of humans, God indicates his will for humanity to ‘subdue’ and have ‘dominion’ (*kibhšuah* and *wurdu*) over nature (v.28). This marks an additional blessing conferred on humanity as a *nefes khayyah*. The dominion conferred on humanity is limited to only other living creatures and not the non-living creatures (v.28). In v.29-30, God makes provision for humanity and animals concerning their nutrition. A carnivorous tendency is conspicuously missing.

One would think the narrator shows his minute variation in the narration through the style of omissions and repetitions. A divine assessment is expected by the reader after the creation of humanity, but this is absent. Instead, God approves everything he has created. He sees everything to be *tobh me’od* (very good). As Westermann rightly observes, this modified phrase of the divine assessment (*tobh me’od*) is not for the
events of the sixth day but for everything created.\textsuperscript{14} The previous approvals are by this declaration subsumed into the overarching approval which is expressed in the qualification of - \textit{tobh} – by the adverb – \textit{me’od}. All that has been created so far by God is pronounced as ‘very good’. The significance of this divine assessment is its futuristic implication. The lifelong purpose of creation, instead, of a creation set within limits is what is at stake. In other words, what has been created by God is very good because it will be useful indefinitely.

\textbf{Gen. 2:1-4a}

Heavens, earth and the host of them have been created (v.1). The opening in v.2, however, creates suspense as one wonders what will happen on the seventh day if everything has been created. As it turns out God rests on the seventh day from the work he did during the six days. With no act of creation other than God’s rest, one wonders why this day also receives God’s blessing and sanctification. This indicates the importance of the act of resting and it is revealed in the repetition of the word-\textit{šabhat} (v.2; v.3). The power of fertility, which characterizes the blessing of the \textit{nefes khayyah} also applies to this day because God blessed the day.\textsuperscript{15} Consequently, the day is to be productive in the “power to stimulate, animate, enrich and give fullness to life”.\textsuperscript{16} In this sense, God’s rest validates the seventh day and makes it as significant as the other days in the creation account. Again, God’s rest seals the act of creation, bringing creation to an end. The narrator pulls the curtain down by the repetition of the pair of words – \textit{haššamayim} and \textit{ha’arets}. This technique of inclusion signifies the completeness of the narrative.

The reading above brings up a number of issues relevant to the ecological crisis and SD. Before these issues are considered, the nature of the ecological crisis and its nexus with the concept of SD is explored.

\textbf{Ecology and Sustainable Development}

The term ‘ecology’ is “the total relations of the animal to both its organic and its inorganic environment”.\textsuperscript{17} The threat to these relations has resulted in what is termed ‘ecological crisis’. Ecological crisis occurs when the environment of living organisms changes in a way that
destabilizes their continuous survival. Though ecology is concerned with living organisms in their habitat and their relationships, the ecological crisis embraces other factors in a complex twist. This is evident in the difficulty which characterizes the conceptualisation of the crisis. According to Mante, the ecological crisis centres on the threat to human extinction.\(^{18}\) Rajotte and Breuilly, on their part, liken the ecological crisis to an ailing earth. The earth is plagued with diseases such as “drought, famine, global warming, the spread of deserts, vanishing forests, pollution of seas ....”\(^{19}\) These factors, for them, cumulatively affect the entire earth and constitute ecological crisis.\(^{20}\)

For many, the complexity of the ecological crisis and the difficulty in understanding it calls for an integrated effort which combines insights from diverse areas into a coordinated set of solution. One solution that is gaining wide acceptance is Sustainable Development (SD). SD is defined as the development that meets the needs of current generation without compromising the ability of future generations to meet their own needs.\(^{21}\) This approach represents the overt display and the overriding acceptance of integrating environmental issues with development.

SD operates on the presupposition that the ecological crisis is one out of the many inter-connected threads of problem the world faces. For instance, social problems such as poverty and overpopulation are complications of their own, but they also directly bear on the ecology, mostly in a negative manner. The underlying assumption, therefore, is that a better comprehension of the world’s problems, including the ecological crisis, is only attainable when the inter-connectedness of the problems are taken note of and made to inform the kind of solution identified. In this respect, the objectives of SD exemplify this integrative process.\(^{22}\) These objectives illustrate the first attempt to strongly integrate poverty alleviation, environmental improvement and social equitability through sustainable economic growth.\(^{23}\) The society, the economy, and the natural world, thus, emerge as the three pillars SD revolves around. There is however a dilemma in this integrative process for a solution. Solving social issues will demand an increase in economic growth and this intends also calls for more use of the earth’s resources. This is what is termed as the ‘environmental paradox’.\(^{24}\)
SD deals with this dilemma in a clever and open way. Its uniqueness is seen in the holistic manner it addresses the world’s crises. If SD is the development which sees to the needs of present generation without compromising the ability of future generations to meet their needs, then present actions on the environment have a bearing on the future. Accordingly, much as poverty and other social problems have to be dealt with presently, and mainly through the use of the environment, this has to be done in a manner that will not compromise its usability by posterity. In this sense, the present and the future are joined in a consistent interrelationship for their respective benefit. Through this, not only is humanity dignified, but the natural world is equally acknowledged, respected and cherished.

**Sustainable Development: the Creation Story and Ecological Solutions**

Creation stories are universal. They represent humanity’s deepest concern to explain the reality experienced in the world in relation to the beliefs they hold about the cosmos and its creator. SD as a developmental paradigm is concerned with standard life for humans and the rest of nature. Humanity’s fate is interlocked with that of the natural world in such a manner that humans cannot help but acknowledge this truth and act in a manner which shows understanding of it. Actions flow from beliefs and if beliefs and practices of human beings bear on the ecology, then the creation stories as embedded in the Christian tradition and which epitomize Christianity’s reflection on the cosmos have to be examined to bring to the fore the positive ways SD goals can be advanced.

There are some symbols derived from the Genesis account examined earlier, which can inform positively religious beliefs that can influence human attitude to the environment and its ecology. They include the following:

1. The text communicates the fundamental truth of the divine source for existence of the cosmos. The cosmos is not a haphazard entity which burst into existence. It is rather a testimony to a Being (God) who is beyond comprehension but from whom the totality of what
exist emanates. God created the cosmos in a systematic and orderly manner, thereby demonstrating his commitment to it.

2. It is emphatically stressed that what God created is good. This description is not a mere aesthetic evaluation of the world. The Hebrew word ‘good’ (tobh) has many facets of meaning – “pleasant, practical, suitable, nice, friendly, just, morally good” – but the contextual environment seems to point to a functional evaluation.26 The created world, then, is good for a purpose. This purpose is to sustain the inherent order and beauty of creation.

3. The narrative brings to light the inter-connection between all creations and at the same time the inherent distinctiveness. For instance, the distinctiveness of living beings (nefes khayyah) from the rest of nature comes to the fore in the text. This is seen in the power of fertility given to animals, including humans. There is also a further distinction made between humanity and the rest of the living beings. This is revealed in the creation of humanity in the image and likeness of God. Human beings are also given dominion over other living beings in the air, in water and on land.

4. A lasting existence of what has been created is underscored in the narrative. There is no conspicuous indication of a terminus to creation. There is, rather, a covert indication of a progressive timelessness for creation. In other words, the narrative is forward looking with its optimism rooted in the quality of creation at the beginning, being ever present in the match into the timeless future.

5. Gender equality is strongly represented in the narrative. The divine connection seen in the image and likeness of God is shared by both male and female. The narrative does not give any hint on the elevation of the male over the female. All the qualities imposed on the created ’adam goes for the male and female.

6. God’s rest on the seventh day is juxtaposed with the work of God in the preceding six days. The act of working in this sense is presented as the conscious effort of engaging in purposeful activity. God’s rest on the other hand signifies a completed task and as Westermann writes, “The creation of heavens and earth ... has the appearance of a ‘once and for all’ event. It cannot be repeated; it is not simply continued.”27 Divine labour brings creation into being, divine rest
ends it. Work and rest lay at the very basis of creation, implying their continuous importance in the sustenance of creation. But the subject this time is not God but human beings themselves who have to work and rest in ensuring its survival.

The above symbols hold a lot of significance for SD which seeks the wellbeing of humans, animals, plants and the entire natural order in a holistic manner. That is clearly reflected in the narrative. The dominant recognition given to God as the creator of all that exists serves as a major avenue for positive change in the development process. Farmer posits that when God is viewed as the creator and the source for all there is, then all of existence is viewed as the concern of God. God’s care is not partial but holistic. In the narrative, God’s care is not limited to humanity but the whole of the cosmos. He created the heavens and the earth and pronounced them as good. This holistic approach should direct the development process. The world’s system is characterized by social and economic inequality. To reverse this, the whole should be focused, and all classes of people in all races should be at the centre of the development process. Again a holistic approach demands genuine care for nature. This should not be because humanity derives its existence from it, but more importantly, nature shares with humanity the divine source and divine care.

One endemic problem with SD is the tension between humanity and the rest of creation. As humans continue on their survival drive, the natural world and the ecology suffer. This is explained by many as testimony to humanity’s superior position in creation. But does the narrative support this negative anthropocentric view? A yes and no answer can go for this question depending on who reads the narrative and what he or she wants to achieve. In the view of Tucker, anthropocentric views in the narrative do not go unchallenged. The narrative contains structures which confronts this dilemma.

One is the cosmocentric nature of creation which is evident in the order in which creation took place. Human is not created first; it is light. It is not until the sixth day before ’adam is created. And even that, a whole day is not assigned to ’adam’s creation. He shares that day with land
animals. Two is the emphasis on God and his rest on the seventh day. This emphasis limits the aura which the creation of humanity received on the sixth day. God shifts attention to himself after all that talk on the creation of humans. This is very significant. It is God who brings all this into being. He is the one under the spotlight on the seventh day which ended creation.

Notwithstanding these challenges, the anthropocentric view holds a lot of prospect in that it acknowledges the special role of humans in creation. The commandment in Gen.1:28, as read by many, represents the responsibility of humans and not a licence for the injudicious use of nature. Tucker, for instance, writes; “the special human role emphasizes responsibility and not rights”.\(^\text{30}\) This positive recognition reflects in SD, where humans are the agents of the positive change the world needs.

The disputes which plague the discourse for a solution to the ecological crisis can reduce if the responsibility of humanity is taken seriously, digested and positively geared towards addressing the ecological crisis. White, as quoted by Tucker, holds that “all forms of life modify their contexts”.\(^\text{31}\) In other words, living beings have some inherent force to induce change in their life and their setting. It is evident that humans have more of this inherent force than the other living creatures. Arguments on whether this force of change is existent and on what basis should humanity’s force of change intrude that of other creatures miss the whole point. What should form the basis of discussion is how humans can use the divine blessing to ensure the sustenance of the world.

The central role of humans in the sustenance of the world is deducible from the order God has imposed on creation. How does God intend keeping this order on earth? Humanity’s bond with God, through his image and likeness, “entails both the freedom and the responsibility to act on God’s behalf.”\(^\text{32}\) Thus, the nature of humans is tied to the structure of God’s nature. When this understanding is linked to the issue of dominion, humanity’s hegemony is then held in check by the nature that it shares with God. Again, this dominion is given in the framework of the goodness of creation. This is evident from the affirmation of the phrase ‘it is good’ (\textit{ki tobh}) which echoes throughout the narrative. Tucker could not have given a better counsel when he writes that “to deny that power and its
concomitant responsibility and withdrawal – or attempt to – is as dangerous as overreaching one’s authority”.  

The march towards a sustainably developed world is a march for change. Human beings are fundamental to this process of change. This explains why equity and equality are major targets for SD. Since poverty negatively impacts the ecology, the issue of inequality and inequity have to be given serious considerations. Mellor points out how the ‘economic man’ in his ambition to be like God subordinates nature and women in the process. The current world order, she continues, creates few opportunities for women and puts the rest of humanity and the planet in danger. This in many ways is incongruent to the equal position implied in the creation of both man and woman. The narrative calls for a deconstruction of the world system which blatantly subordinates women to the periphery of world issues.

Fundamental to SD is the future. Since the environment is indispensable to human life, it has to be in good shape for future generations to also have their share of life. The proposal to think of future generations when present generations have not had their fill is unpleasant but unavoidable if SD is to achieve its goals. This futuristic outlook is reflected in the narrative by the implicit idea of the lastingness of creation. The uncertainty with the future can again be addressed through the infinite power and intelligence which humans have as a gift from God. Humans have to be confident in the image shared with God. This confidence should lead them to carry out their actions in true reflection of God’s nature.

The guiding principle for humanity is that what God created is ‘very good’ (*tobh me’od* - Gen. 1:31).

**Conclusion**

Gen 1:1-2:4a is a testimony from ancient minds on how the universe came about. This speaks to SD in a profound and solemn manner. A divine source for the cosmos brings purpose to humanity’s stay in the world. A divine being that cares for all including the natural world challenges humanity on inequity and inequality. The goodness of creation, also, implies a continuous functional importance of creation. The significance of humanity’s uniqueness lies in the responsibility it bears on
its shoulder to ensure the sustenance of what the divine has done. Gender equality as the text promotes should call for a deconstruction of the pervasive philosophy of the ‘economic man’. SD is basically concerned with the future: a priority which the narrative and the Bible as a whole share. To this end, a dialogue between the ideal of SD and the Bible is a prudent step in this integrated quest for a solution to the ecological crisis.

Gen. 1:1-2:4a proves to have a lot to contribute to the SD debate and the ecological crisis in particular. This epitomizes the many positive symbols the Bible as a whole holds as the applicable key for resolving the environmental difficulties. Biblical scholars and students are to search the scriptures and actively partake in the ongoing discourses toward solutions to the various challenges the world faces. That is one good way to make the Bible relevant in this ever increasingly secular world.
Notes and References


4. The choice of text is informed by three considerations. First, creation stories in general present the most fundamental message of how life as a reality begun. Second, the creation stories speak to the environmental crisis in a direct way more than other texts. Third, the creation stories, particularly the narrative of Gen1:1-2:4a, are considered by many as the source for the unbridled anthropocentric philosophy of the Judeo-Christian traditions which is blamed for the current environmental catastrophe the world faces.

5. These two opening verses present some grammatical challenge which has implication for their interpretation. Should v.1 be read as an independent clause or a subordinate clause? R. J. Clifford and R. E. Murphy “Genesis”, in The New Jerome Biblical Commentary, eds. Raymond E. Brown, Joseph A. Fitzmyer and Roland E. Murphy. Bangalore: Theological Publications, 1992,10, point out that reading the verse as independent clause seems improbable syntactically because of the first two words which make up v.1. But this view is rejected by C. Westermann (Genesis 11: A Commentary, trans. John J. Scullion. London: SPCK, 1984, 94.) who reads v.1 as an independent statement and v.2 as parenthesis with v.3 as the main statement. However, as R. Davidson (“Genesis 1-11”, The Cambridge Bible Commentary, eds. P. R. Ackroyd, A. R. C. Leaney and J. W. Packer. Cambridge: University Press, 1973, 13) points out, these opposing views on the relationship between the first two
verses are both valid or at least convincing arguments can be made for both cases because of the grammatical structure of the verses.


10. A mathematical illustration demonstrates this clearly. The text, Gen 1:1-2:4a contains 474 words. Out of this, 114 words make up the sixth day alone which makes 24.05% of the words used in the story.

11. This is the expression of a desire or will in the 1st persons, eg. “I will” or “let us”.

12. Westermann *Genesis 11*, 142. He believes a plural of deliberation is meant in this usage.

13. See Westermann; *Genesis 11*, 148-155 for extensive discussion on the history of the meaning of this phrase.

14. The word *me’od* which is an adverb indicates an overarching pronouncement for all what is created.


20. This paper recognizes that the ecological crisis is intricately linked to the environmental crisis and that solving one is dealing with the other.


22. Lélé, “Sustainable Development: A Critical Review”, 611. These objectives are: reviving growth, changing the quality of growth, meeting essential needs for jobs, food, energy, water, and sanitation, ensuring a sustainable level of population, conserving and enhancing the resource base.


24. The ‘environmental paradox’ battles with the question whether there should be an increase in the demand of the natural resources to curb societal problems, or, instead, there should be a reduction in the societal demand on the earth to safeguard the natural world.


29. I know the otherwise of this view can also be advanced. I stick to my view though this is seen as the source for the damage humanity has carried out on the rest of creation. I do not see why this should be the case even if humanity is placed above the other creation.


37. God’s nature is an elusive concept. However, the narrative provides clues to what God has revealed of himself. His care, his optimism and his diligence are principles which humans have to inculcate in their lives and their relationship with each other and the natural world.