

# Stewardship: Christian Responsibility Through Circular Economy – A Community

## “TAKA PROJECT”

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### ABSTRACT

The idea of stewardship, which emphasizes the duty to look after and safeguard the Earth, has its roots in Christian teachings. In light of the circular economy, this article investigates the application of a community “TAKA project” that fosters stewardship. As a strategy for attaining sustainable growth and protecting the environment, the circular economy is garnering more and more attention. Businesses and individuals must align their operations and consumption habits to minimize or eradicate waste and pollution, while also recycling products and resources to restore the ecosystem. As stewards of the planet, humans must accept responsibility for the environment if the circular economy model is to be successfully implemented, which calls for community cooperation. This study examines the execution of a community “TAKA project” that addresses sustainable development in the local community and protects the environment by promoting stewardship through circularity principles. Through sustainable consumption and production, this TAKA project seeks to inform and include the local community, particularly schools. Pope Francis’ call to transform our “throw-away culture” is closely linked to the Christian concept of stewardship and its relationship to the circular economy. It highlights the significance of sustainable development and responsible resource management, which is in line with the biblical call to care for God’s creation by embracing the circular economy’s principles and actively participating in the community to reduce resource depletion and environmental degradation.

**Keywords:** Circular Economy, Ecology, Education, Stewardship, Theology

### INTRODUCTION

Tony Benn famously said, “If you store your wastepaper basket for fifty years, you have a public library,” emphasizing the widespread use of paper in various aspects of life, such as shopping receipts and basic transit tickets. It was even used to wrap dried fish in the market. In terms of usage frequency, it ranked second only to plastic worldwide. My observations indicate that the use of paper for printing documents and school assessments is consistent, starting with my children’s paper consumption and continuing with us. In today’s modern world, paper has been taken for granted, but I agree with the study by Parayno and Busmente (2006) that “paper has been recognized as one of the fundamental building blocks of society.” Most of the time, this was due to people being on the verge of misusing it. The Philippines is home to six abaca pulp mills, 39 local recycling paper mills, and one integrated paper mill with a tree plantation, all of which contribute to the country’s paper production. These facilities provide 46 industry participants with the necessary pulp for paper production (Parayno and Busmente, 2006). Online learning has changed the traditional practice of using paper and pens for tests and assessments during the pandemic. However, returning to normal schools are reverting to traditional tests and assessments, which means educational

institutions and other offices are once again relying on paper as the primary tool for education and information. According to the “Forest and Paper Industry,” a ream (500 sheets) consumes 6% of a tree. Considering this, have you ever wondered how many trees are cut down to produce paper? Studies project that approximately 42 million trees are felled each day for paper and other purposes (Kilgore, 2023). Fortunately, due to limited local wood pulp supplies and the high cost of imported wood pulp, recycled fibers and wastepaper are the main raw materials used for paper production in the Philippines. While some paper mills use only waste materials, others combine recycled fiber and imported wood pulp in specific ratios to achieve the desired final product quality (Parayno and Busmente, 2006). Once disposed of in the garbage, what happens to the paper waste generated by humanity? Working in academia for fifteen years, transitioning from elementary school to university, I can confirm that pen and paper continue to be the most commonly used learning materials by students to this day.

It is undeniable that paper remains the most secure long-term method of data storage and serves as a tangible representation of knowledge and understanding in the classroom (Parayno and Busmente, 2006). It is the most commonly used material and can easily be replaced, especially by students. In every elementary school classroom, there is a bin filled with shredded paper and other waste. Paper is essential, like the blood that sustains businesses and schools. This hypothetical scenario highlights the significance of paper in people’s lives. In the college foyer, there is a photocopier machine, and boxes of paper are transported between hallways, offices, and classrooms. Teachers and students encounter various paper materials daily, including research papers, handouts, graphing sheets, art papers, and bound books. As educators, we must consider the broader perspective of education by not only providing students with theoretical knowledge but also challenging them to apply it in real-life situations. This approach also involves exploring alternatives to minimize paper usage among students. Reducing paper consumption or taking responsibility for its use are critical approaches to addressing this complex issue, which could have a ripple effect on the economy. Cutting back on paper manufacturing may result in job losses and push people in this industry into poverty. How can we strike a balance between paper usage and production without harming the environment or the livelihoods of those who depend on this industry? We must acknowledge that paper waste is a prevalent problem in offices and schools across every municipality. Many individuals, including teachers, are unaware of the daily pollution caused by paper waste.

Have you ever thought about the amount of paper that ends up in landfills, including on the streets? Studies show that approximately 1.4 billion trees are wasted each year due to product packaging and other paper waste (Kilgore, 2023). It is a challenge for all of us to reduce paper usage in our daily activities and change our perspective on the world’s resources. Instead of seeing them as mere commodities, we should recognize them as finite resources entrusted to us by God since the creation of the first human being. Recycling paper not only helps to reduce greenhouse gas emissions that contribute to climate change, but it also requires 70% less energy and water compared to creating new paper from trees. Manufacturing with recycled paper also minimizes pollution, which can lead to smog and health issues. In fact, according to the Environmental Protection Agency, recycling one ton of paper saves 17 trees and more than 3.3 cubic yards of landfill space (shareit.co.uk, 2015). In other words, recycling not only benefits the environment but also provides potential opportunities and livelihoods for community members. We should ask ourselves: Are we contributing to the worsening ecological problem, or are we part of the solution? How can we reduce paper consumption in various aspects of our society? What are the potential uses for the paper collected in classrooms and offices, and how can we repurpose it? This paper aims to propose a step-by-step solution to make these papers more valuable for the community, leading to sustainable development.

### **A. Linear Economy Assumptions**

For the past decade, the Philippines has been one of the main contributors to worldwide garbage, ranging from different kinds of plastics to paper waste. Paper is the Philippines’ second-most produced solid waste, accounting for nineteen percent of all municipal solid waste production (Parayno and Busmente, 2006). You

might wonder why I choose to dwell on paper rather than plastic. In this context, the Pamantasan ng Lungsod ng Maynila (PLM), as an academic institution (not just PLM but every educational institution and office), always lives on paper. We are unaware that we are one of the biggest contributors to paper pollution due to the daily volume of paper used. As a People's University, we need to comply with the Ecological Solid Waste Act of 2000 (RA 9003 Article 2 Section 3). The segregation of waste from its source to help the environment means we should start at the waste source reduction at the bottom of every local government unit (LGU) in every household and office. Different kinds of pollution are the challenges every Filipino and every human being faces. Furthermore, this law aims to reduce the amount of solid waste disposed of every year, such as plastics and paper, through recycling, reuse, and composting activities (FFTC Agricultural Policy Platform, 2013). However, even though the law has existed for decades, it will become an open secret. It will not guarantee that people will follow, especially in every household or in different communities. This project is an opportunity for every school to use this platform to educate individuals on the importance of segregation and recycling. Everyone in every academic institution and office is aware of the importance of paper, from simple memos and letters to single-use papers during quizzes and exams.

This school year, over 27 million students enrolled (Philippine Information Agency, 2023) in basic education, and 1.83 million private and 1.57 million public institutions (Giray, 2022) used a sheet of paper a day nationwide. The paper consumption is too high to fill dump trucks; even parts of dump sites are full of paper waste on a daily basis. Wherever we go, paper is considered part of our daily lives; from soft tissue, food packaging, cups, cardboard, magazines, newspapers, and books, we can see it and use it everywhere, even in the hospital, for medical materials. For some, it is their favorite tool for storing important information (see footnote 3) about historical and scientific data for future generations. According to the Global Forest Resource Assessment, roughly 80,000 to 160,000 trees are cut down daily, so we need sustainable alternatives to tree-based paper to save our planet (5 Sustainable Alternatives to Tree-Based Papers). In this regard, we need to find an alternative solution to making tree base papers, which are also good for fibers such as banana trees, eucalyptus, rice straw, sugarcane pulp, and hemp.

On the other hand, at PLM, in the canteen and every food stall, you will see that paper containers are more common than single-use plastics (which is good in some sense). However, despite the little effort to shift minds about the negative and harmful effects of plastics on the environment (as we follow the Solid Waste Management Act), shifting on the use of too much paper is not good either because there is a tendency to be reckless or too abusive, resulting in too much paper use. The linear assumption of people is *that "paper is biodegradable,"* which is why some of them keep on using it irresponsibly. Nevertheless, we are too naïve to say this *paper is biodegradable* (in some sense, it is true) because we are unaware that paper production can also threaten the environment. Paper waste has negative effects, accounting for around 26% of total waste at landfills, and its production causes deforestation, uses enormous amounts of energy and water, and contributes to air pollution and waste problems (The World Counts, "Paper Waste Facts, 2023). Some of us are unaware or ignorant of the negative effects of too much paper waste on the environment. Asian Development Bank report indicates that the 'local pulp and paper industry in the Philippines supplies about 61% of the total paper consumption, while the rest is imported. According to the annual report of the Asian Development Bank, "per capita consumption of paper in the Philippines is 13 kg, which is still much below the per capita paper consumption of developed countries (DBP, 2005). However, Metro Manila and other urbanized areas in the Philippines show the highest density in paper consumption. 6,700 tons of waste are generated daily, and approximately 720 tons are either recycled or composted (ADB, 2004). This means that despite the lack of production, the country is ensuring the importation of enough paper for public consumption. In some sense, community mindset in transferring from plastic bottles and single-use plastic cups to paper plates and cups is more convenient and environmentally friendly but also has some environmental risks.

Hence, though we patronize paper products, we must know that some materials are included to make them more durable and water-resistant. Those chemical components lead to durability, and the paper cannot be

decomposed easily in two to six weeks (a decomposition stage of typical paper). Furthermore, according to the New York City Department, it generally takes five years for paper plates to decompose (Conserve Energy Future, 2022), which is also very harmful to the environment. We can notice that the regular period for the decomposition of the paper plate is prolonged due to the different substances in it. On the other hand, research shows that “a dangerous chemical known as PFAS (short for per- and poly-fluoroalkyl substances) was recently found in paper plates and other disposable food wares” (Segedie, 2019). PFAS is harmful and risky to human health and the environment because it ‘does not break down in the environment, can move through soils and contaminate drinking water sources, and can build up (bioaccumulate) in fish and wildlife.’ Other studies by the Center for Environmental Research (CEH) indicate that PFAS chemicals are likely dangerous to both humans and the environment because of the chemicals that can leach out of boxes, containers, and other food ware products and into our food, as well as our air, water, and soil (Segedie, 2019). Different chemicals are included in making a grease-proof, waterproof, and stain-proof paper plate. They are known as Teflon, Gortex, and Scotch Guard, and they can even migrate into our bodies.

## **B. Circular Economy Assumptions**

In the Philippines, despite passing the Ecological Solid Waste Management Act of 2000 (Republic Act 9003), it shows how poor and improper the waste disposal practices are in the country (from the household and school level). The global community recognizes that solid waste management (SWM) is an issue that every country faces because it requires serious attention and dedication from the whole community, as well as proper implementation of the law by the government. Philippines as one of the developing countries in the world, and the government as well as the economic sectors are ‘in aggressive pursuit for economic growth, but this has resulted in the manufacture, distribution, and use of products and the generation of waste that contributes to environmental degradation and global climate change (Castillo and Otoma, 2013). This event will greatly impact people’s lives, especially the poor, animals, and the whole creation. At this stage, helping the LGUs and local communities is critical to achieving the goal of ‘RA 9003’, as we do our part and make small efforts in proper waste disposal and segregation (starting at the household and school level) to reduce paper pollution. It is evident that even paper production, which was considered biodegradable, can cause harm to humanity and the environment. The question and challenge for everyone today is: how do we reduce paper consumption in landfills, or how can we repurpose the paper collected in the classroom or every office? With this, the systematic recycling of paper was introduced and turned into a paper mâché art, or “taka,” to help humanity combat paper pollution and provide livelihood to the community. Papers and other paper products used from the canteen and food stalls should be segregated properly at the household and school level before being brought to the segregation facility for recycling to repurpose and make paper bags and other products.

Paper pollution refers to the negative environmental impact caused by paper-based products’ production, use, and disposal. Paper production involves using wood pulp, energy, and water, which can contribute to deforestation, air pollution, water pollution, and greenhouse gas emissions. Paper pollution is another serious problem caused by paper waste. It is estimated that by 2020, paper mills will produce 500,000,000 tons of paper and paperboard a year! We need this product, and a reduction in its use is not on the horizon. Pulp and paper are the third-largest industrial air, water, and soil polluters. Chlorine-based bleaches release toxic materials into our water, air, and soil during production. When paper rots, it emits methane gas, 25 times more toxic than CO<sub>2</sub> (Paper Facts, 2020). In addition, the disposal of paper and paper products can also cause pollution. Studies say, “paper accounts for around 26% of total waste at landfills.” When paper is not recycled or properly disposed of, it can end up in landfills and contribute to the production of methane of potent greenhouse gas that is dangerous to the health and welfare of the people. Burning paper waste can also release harmful pollutants into the air. Let us be mindful that “when paper burns, a lot of poisonous chemicals are released, toxic substances can affect our lungs and heart, and burning any organic material releases carbon monoxide, a colorless, odorless gas that reduces the oxygen in the air we breathe. Inhaling this chemical makes people dizzy or sleepy (Our Endangered World, 2023). To reduce paper pollution,

individuals and organizations can reduce paper use, recycle paper products, use electronic communication instead of paper, and choose paper products made from sustainable materials. Government regulations and policies can also reduce the environmental impact of paper production and use.

### **C. Biblical & Theological Foundations**

The imbalance in global resource usage is the cause of the current ecological disaster. The wealthy continue to plunder the natural world, particularly its natural resources, with disastrous results that affect not only the environment but also the impoverished. The rights of others and the environment are violated and degraded as a result, and the rich get richer while the poor get poorer. According to Parama Chaudhury, in the “US in particular, this rise has to a certain degree been accompanied by the poor getting poorer over this period (not just the rich getting richer). Several reasons for this development include deindustrialization, the ICT revolution favoring certain jobs, a fall in unionization, and globalization” (Chaudhary, 2021). Naturally, escaping the cycle of poverty can be challenging, especially in developing countries like the Philippines. However, research in wealthy and developing nations has shown that investing in education and other human resources is one of the most important strategies. Larry Summers states, “When the rich get richer, they get more powerful, and that puts them in the position to lobby for policies that make them richer” (CBC News, 2014). The comprehensive 2012 report of *People, and the Planet*, by the Royal Society of London, concluded that there is a need “to develop socio-economic systems and institutions that are not dependent on continued material consumption growth” (Magdoff, 2013).

The current ecological catastrophe, as we can see, exposes us to a grave state of unfairness on all fronts, where the affluent individuals’ lifestyles are endangering the very means of subsistence for the more vulnerable groups living on our planet. For this reason, before it is too late for future generations, we demand justice by making amends for our debts—not just monetary ones, but also our resolve to act and alter our perspective. “Climate change is a global problem with grave implications: environmental, social, economic, political, and for the distribution of goods,” emphasizes Pope Francis, bemoaning the fact that those who are least responsible for the problem—people experiencing poverty—are disproportionately vulnerable to its deleterious effects. We might claim that everything can be resolved scientifically due to the progress of human technology and arrogance. Mother Earth faces challenges in addressing the possibility of habitability on other planets, as billionaires and countries invest in exploring new objects in space. However, the real problem is not about the possibility or impossibility of life forms on other planets, but the Earth’s derailed state due to greediness, insolence, and pride in humanity. Instead, we should focus on finding evidence of life on other planets or in space, as the solution to our problems is right before us.

Humans are the only ones responsible for why the only home we have is on the brink of destruction. According to Pope Francis, the problems we face today are closely linked to a “throwaway culture,” which affects the excluded just as it quickly reduces things to rubbish, as mentioned above. Most of the paper we produce is thrown away and not recycled (LS, 22). Science and technology are currently offering the world a kind of creation that would be considered useless or nonsensical because of its usage, value, and service to humanity, while destroying what we need the most—mother nature. Thus, in times of modernity, we are all challenged by the Scripture’s message to become faithful stewards of God, who is the Creator of all things, the real source of power and wealth of the world, and to accept the responsibility to become God’s co-creator in the world.

#### **1. God is the Creator and Owner of all things.**

Paper wastage is a failure to be converted by God based on the teaching of the Church about God’s creative ownership, which is clear in Scripture, saying how the Lord claims ownership of the earth and all that dwell in it (Psalm 24:1). The first line in the book of Genesis states, “In the beginning, when God created the heavens and the earth” (Gen 1:1), which is a clear statement of the origin of all things that existed in the world. The

Lord, who is God, who created the heavens, designed the earth, and made it (established the world; did not create the world empty), formed the world to be inhabited by humanity (Isaiah 45:18). It is the Lord God who has made the heavens and the earth with your great power and your outstretched arm (Jeremiah 32:17). Many of us, as humans, focus on the human element in the creation story, but we should not miss an important point: that God ascribes inherent value to nonhuman creation separate from what creation provides for humans (Hyneman and Shore, 2013). We know that everything that God has created is very good (Genesis 1:31) with intrinsic goodness (LS, 65), which is why we cannot separate the intrinsic value of other creatures from our own. We, humans, are stewards of God's creation, as we share the Earth and act in ways that will restore, promote, and protect the environment by ensuring that our activities toward development are ecologically sound (Hyneman and Shore, 2013) and according to God's design. Humans should be aware and informed that we have nothing in possession in this world; in other words, no "innate ownership in creation" (Hyneman and Shore, 2013). God is the innate owner of creation, which has been kept, possessed, and acquired by humanity by any means. When humans are created in God's image and likeness (Genesis 1:27), it corresponds to a certain degree of 'responsibility for the earth that we, humans, are endowed with intelligence and must respect the laws of nature and the delicate equilibria existing between the creatures of this world (LS, 68).

In this way, it is a mandated demand invitation to all humans to find and understand that our origins are the soil (ground) of the earth and in the breath of God that made us living beings (Gen. 2:7). We cannot deny that humanity is part of the larger aspect of the created order. We expect a good relationship in promoting and protecting the whole of creation because those come from God. Our dignity and rights came from creation itself, as we are created in the image and likeness of God (Gen 1:27), as we act according to the Creator's goodness and the reason why the Creator created us. The *Rûah* is the one who is present at the start of creation (Gen 1:2) and gives life to the whole creation. Let us not forget that the 'theology of spirality for the pneumatic and sacred sustainability of nature and the poor is borne in the emerging context of "cosmocentricity," which regards the Earth as integral to the cosmos (Fung, 2022, *unpublished*).

Cosmocentric ideology is a way of placing the Cosmos/universe at the center of one's individual societal, spiritual, intellectual, economic, and practical life, as one looks at the entire cosmos and nature as important aspects of life and existence. Thus, this opposes the "anthropocentric," an approach that emphasizes humanity as the essential element of existence in the universe, as 'humanity believes that humans are radically separate from and above the nonhuman natural world.' Sadly, this ideology will license people to brag about the wrong notion of their fundamental rights over other creatures in the world and the cosmos. According to (Fr. Benigno Beltran SVD 2020), the modern anthropocentrism at the root of the crisis itself flows from a distorted Christian theology that stresses not stewardship and communion, but mastery and dominion" as humanity took literally, "be fertile and multiply; fill the earth and subdue and have dominion over the other creature on the earth" (Genesis 1:28). The reality is, most of the time, humanity can forget and reject the idea that other parts of the creation had fundamental rights too like us. However, what we did is take over and full control of the fate of other created beings like the environment as we embrace dominion over them without consideration for their inherent values and particular goodness" (LS 69 & CCC 339).

Consequently, we need to think about and understand alternative ways to reduce paper waste to reverse our actions' negative effects on nature. Circular economy comes into the picture to lay down the possible alternatives and options and what we can do to combat the negative effects of past and present human actions. The main goal of the circular economy is to build a sustainable society based on recyclable and renewable resources. Humanity is protecting society from different kinds of waste as they form a model that no longer considers resources as infinite (change of mindset) (Fung, 2022). The current situation of ecological crisis today exposes the inability of humanity to uplift the status of the creation, "to praise and give thanks to God as the manifestation of our ingratitude to God and our incapacity to live the Eucharistic ethos" (Kureethadam, 2016) because we cannot live out the real essence of stewardship, which is part of our being since the creation of humans; humanity, especially the rich and powerful, takes advantage of the

world's resources. It is a reminder for everyone that everything has an end, everything is finite, and only the mercy and compassion of God for humanity are infinite. Despite the fact of wrongdoing, God is still the one who initiated and bridged the creational loop between the Creation and God, the Earth cosmos and God, and between Earth and heaven through Jesus' resurrection (Fung, 2022). God sustains everything out of goodness and cares for the cosmos.

## 2. God is the Source of Power and Wealth in the World

Paper wastage is related to humanity's arrogance, for we have forgotten that everything in this world came from God, the real source of wealth and power. Our Christian faith teaches us that God is the Creator of the universe and everything in it (Genesis 1:1), the ultimate source of all power and wealth in the world. This faith also teaches us to remember that God is a loving and generous God who blesses people with abundance, prosperity, and power in life (Deuteronomy 8:18). The Gospel warns us about serving two masters: "You cannot serve God and mammon" (Matthew 6:24); mammon is an Aramaic word meaning wealth or property. Alternatively, "the root of all evil" (1 Tim 6:10). We know that an excessive desire and focus on riches and wealth can lead us to negative actions toward others as well as with creation, such as greediness and selfishness, as we know that our mission as Christians is to love God, our neighbors, and creation, not the wealth of the world. For some, wealth has always been equated with power, and this mindset is very rampant in the present because it will become the basic source of influence and power. This power leads to the exploitation of others and natural resources. The greater challenge of globalization for us Christians is to bridge the gap between the rich and the poor, as the world's wealth has passed into the hands of the few and the corporate world. "We should be aware that the *Ruah* of God" is the one sustaining the whole creation and cosmos as it is indwelling in creation, not our limited human capacity. According to Jesuit theologian Jojo Fung (2022), "the cosmic field of energy, constituted by the zillions of neutrinos that *Rûah* pervades, is the self-same divine matrix that has made possible the sacred sustainability of the cosmos and creation." In this regard, it is the right time to oppose the main goal of the world's whole economic and capitalist system, which looks to people and natural resources as an avenue to gain profit. As Christians, we know that the Spirit of God guides us to discern and plan our actions for the common good of the people and the whole creation. We know that wealth in itself is not evil; instead, humanity clings to it because it gives power and connections. We need money in our lives but let us ensure that it can give life and empower human life, not oppression and injustice on the part of the weak and the poor. Jesus' challenge to the rich man is to "go, sell what you have, and give to [the] poor, and follow me" (Mark 10:21).

Our salvation history in the Old Testament, is clear that God's provision and blessing are directly connected to their obedience to the law of Moses. In contrast, in the New Testament, Jesus teaches us to seek God's kingdom and righteousness as we love God, our neighbors, and our creation. However, it is very important to note that our Christian teachings also emphasize the importance of being a good steward and being responsible with the use of wealth and power in the world, as we are called to love and serve others as we use our resources and abilities to help those in need, especially the poor. However, today we can see that 'political life has no long-term plans to improve people's lives and advance to the common good, but only with slick marketing techniques that discredit others (Fratelli Tutti, 15). Thus, we should be aware that God is the source of power and wealth in the world, not purely the works of humanity; let us keep in mind that every material possession and worldly success are not the ultimate measure of a person's worth or value. We cannot deny in our end that the "pleroma" fullness of divine excellence and power of God is when we realize and understand that God the Creator sustains nature and the whole cosmos as well as the poor, which is the "pneumatic basis for postulating the sacred sustainability of nature and the poor" for the vision of the Earth as "divine" and "sacred" enables humankind to perceive the poor as "imago Dei (Fung, 2022).

## 3. God Give us the Authority to Become the Steward of the Whole Creation

The interrelated ill effects of paper wastage call us to promote, care and become responsible stewards

, which is authentically human and Christian and deeply rooted in the gospel. As we care for our common home and the weaker members of society, we imitate God's loving care for all creations (Kureethadam, 2016). The initial authorization was given to the first human beings, giving them authority to "fill the earth and **subdue** and have **dominion**" (Genesis 1:28), which encouraged the unbridled exploitation of nature by painting humans as domineering and destructive by nature. However, this is not the correct interpretation of the text, and we must "forcefully reject the notion that our being created in God's image and given dominion over the earth justifies absolute domination over other creatures" (LS, 27), where it is the call of stewardship as we become more responsible to "cultivate and care for the garden" (Genesis 2:15). "Tilling" refers to cultivating, plowing, or working, while "keeping" means caring, protecting, overseeing, and preserving, meaning our mutual relationship with nature (LS, 67). God gives us talent and entrusts us possessions to nurture and cultivate (Matthew 25:14–30). The notion of stewardship comes from the Hebrew Scriptures' "affirming of the reality that God owns everything, and we are called by God to steward, not to own," to exploit and take advantage of the creations. Technically speaking, we do not own our money and wealth, and everything we have in this world belongs to God, as He called us to. "Our mission is to steward all God's gifts according to God's will and purpose." We can say that while God appoints humanity to become the steward of the whole creation, we have a full responsibility towards it, which belongs to God (the creator) and not to us (part of creation). However, what is happening nowadays? Do we still say that we become a good steward of God's creation when, in fact, human activity is the primary source of its destruction?

"Steward" in the biblical context refers to an overseer responsible for the goods and property of another, not the owner, but one who has a responsibility to an owner to treat goods and property with care and respect (Beltran, 202). Suppose a supervisor or manager's responsibility is to properly manage what is entrusted to them by the company's owner as a teacher. In this case, teachers are responsible for guiding and bringing students to Jesus Christ with the help of the Holy Spirit, which sustains one's mission and vocation. Our Christian faith teaches us 'stewardship that has come from our responsibility to manage wisely the goods and property that are in our possession, albeit in reality; we do not possess or own anything (Beltran, 202). in this world as those belonging to God. The idea of stewardship can be applied in its most original and fundamental meaning to refer to our human responsibility to care for the Earth, as stated in the creation story (Gen. 1-2). However, "humanity has failed to be responsible stewards of the Earth, and this has led to the current ecological crises threatening global climate stability and the biodiversity of plant and animal species and endangering even the human species (Beltran, 202).

Pope Francis stated that some forms of pollution are part of our daily experience as we are exposed to atmospheric pollutants that produce a broad spectrum of health hazards, especially for people experiencing poverty. Other kinds of pollution that affect the lives of others, such as transport, industrial fumes, substances that contribute to the acidification of soil and water, fertilizers, insecticides, fungicides, herbicides, and agro-toxins in general, are linked to business interests (LS, 22). The Earth, our home, started to look increasingly like an immense pile of filth as once beautiful landscapes were now covered with rubbish (LS, 21). We need to do something and stop being spectators of our common home's total devastation. Stewards of God's creation have a moral responsibility to listen to the cry of the Earth and the cry of the poor, who are the common victims and recipients of the ill effects of greed in the world. It is the right time for humanity to have an ecological conversion as we realize that the "*Rûah*" who motivated the people in the past, to embrace God's kingdom by conscientiously dissociating or detaching ourselves from the iron cage of the corrupt culture by looking at nature as commodification, for-profit, and scandalous wastage (LS 106, 108) of the global neo-liberalist linear and circular economic model (LS, 51; 56), which is opposed to the three interconnected themes of *Laudato Si'*: peace, justice, and preservation of the environment (LS, 92).

"The call of being good stewards is for all; it transcends to any form of life, whether rich or poor, young or adult, and we are living in the same world, belonging to the same family, and worshiping God, the Creator



and source of all things that we have in this world. Humans are uniquely created and called to exercise responsible stewardship over creation on behalf of the loving Creator. Care for the world is also caring for ourselves, as we think we are dwelling in our common home as a family because certain resources have been depleted (FT, 17). Suppose others are in carefree existence and no longer valued, cared for, or respected, including the environment and people experiencing poverty. In that case, we should not imitate them because humans are at a different stage of wastefulness, which is “unacceptable and excessive” (FT, 18). Furthermore, since God is the real Lord and master of the Earth, we are held responsible to God and should act as the stewards of the whole creation. Through this project proposal, we can reduce carbon emissions and water pollution caused by paper production, which leads to preserving trees and avoiding deforestation, which is a cause of too much tree-based paper production.”

#### **D. Challenge of Stewardship**

The challenge of stewardship and recognition that God is the source of all things visible and invisible, as stated in our Catholic faith (Creed), will start with humanity’s change of heart. It is the right time for us to stop patronizing companies and products that harm the environment, or even those companies and products that do not follow the minimum environmental compliance requirements to operate. We should reduce the use of products that can harm nature as we sustain discipline in every household by strictly implementing the reduction, reuse, and recycling of products or finding ways to repurpose things. Let us respond to the call of time by utilizing the Earth’s limited resources and thinking about how we can help Mother Earth sustain and regenerate the environment. In the classroom setting, every encounter with the students will be a golden opportunity to promote the idea of our interconnectedness with the world and the whole cosmos. We need to have a better understanding and relationship with the environment as we become more aware of the beauty of our faith and value the whole creation.

#### **E. Response: Project Proposal: Taka (Paper Mache’)**

##### **1.1. Overview:**

Filipinos are known for being artistic, especially in finding ways to repurpose things. This project aims to introduce the teacher to a new way of community engagement and extension as the teacher and the students. We know that this community engagement can lead to the teacher’s and students’ awareness and concrete action on their impact on the community. This community engagement aims to break community barriers by building deeper, stronger, and more trusting relationships between teachers, students, and communities. Thus, on the part of the students, they will learn about theories at the four corners of the classroom, but what is essential for them is to apply them and develop them more in the community.

This Taka (Paper Mache) project will guide the community members through creating their own Taka (Paper Mache) made from scrap paper from schools and other public or private offices. This Taka (Paper Mache) project is a way to help the nearby communities to have an extra income to buy basic goods for the family as we believe in the ancient proverbs that say, “If you give a person a fish, you feed this person for a day. If you teach a person to fish, you feed this person for a lifetime.”

##### **1.2. Objectives of the Project:**

1. To provide a livelihood program for the poorest of the poor in the community from the materials available in society, especially paper, as they learn to earn extra money for the family.
2. To teach community participants the basic techniques of Paper Mache, starting with mixing *gaw-gaw* (corn starch powder), applying candle wax, and layering paper on the mold in creating their take.
3. To encourage the community participants to use environmentally friendly materials, such as paper waste and water base or eco-friendly paint and other materials, for their finished products (Taka).

### 1.3. The problem aims to address

The problem that this proposal aims to address is the *problem of paper garbage* in the community, especially in school settings. This project is the best response to the challenge by Pope Francis, “Hearing the cry of our Mother Earth is hearing the cry of the poor.” This notion from the Pope challenges us to become good stewards of the whole creation. One thing is clear: saving Mother Earth and the entire creation is not the determination of the few but the whole community. The challenge for us in the public school settings is to accept the sad truth presented by *Laudato Si’* and accept the fact that ‘climate change is an issue of common good and belonging to all and meant for all’ and recognizes that “several scientific studies indicate that most global warming in recent decades is due to the great concentration of greenhouse gases (carbon dioxide, methane, nitrogen oxides, and others) released mainly as a result of human activity (LS, 23). We should respond to the call of the Pope, either Christians and non-Christians alike, public and private sectors, by recognizing “an urgent need to develop policies so that, in the next few years, the emission of carbon dioxide and other highly polluting gases can be drastically reduced (LS, 26). Furthermore, the researcher believes that doing things for the betterment of Mother Earth and the marginalized sector in society is the core of our social responsibility as we entrust everything to the grace of God with the help of the *Rûah Elohîm* to sustain the feasibility of the project.

### 1.4. Beneficiary of the Project:

1.4.1. The beneficiary of this livelihood project is the local community near PLM, which is living in poverty. This project can increase awareness among people in the community as they will segregate their garbage at home, especially paper, as they find a way to repurpose it in schools and offices.

1.4.2. The other beneficiary of this product is the environment; because of this project, the community (schools and offices) will reduce the paper consumption that can cause clogging on drainage and canals.

1.4.3. The other beneficiary of this project is the Church because of the continuous effort to teach the encyclical of the Pope to the people by inspiring the teachers and the students to accept the challenge of *Laudato Si’* to become the steward of God’s creation by “hearing the cry of the earth is also hearing the cry of the poor.”

## METHODOLOGY

### 2.1: Segregation

On every corner of the campus at PLM, you can see two different colors of trash bins: green for biodegradable and black for non-biodegradable. If you have noticed that color coding for trash is not enough to properly segregate the garbage because, in the green trash bin, some students did not follow the segregation of trash. If you try to look at it, you will see mixed garbage. During the segregation stage, the “Project Taka” will put a separate box in the different offices and classroom corridors so that everyone will know that they must put the paper (not crumpled or wet) inside the box.

### 2.2: Collection/Deliveries and Logistics

While collecting the paper, volunteer students will collect the trash from different places/buildings on the campus every week. Student volunteers will bring the collected paper to the designated place on the campus. At that time, student volunteers will ensure that the collected paper will be disseminated according to their kind. The barangay officials, LGU, or the community leader will help the students facilitate the logistics of the collected and sorted paper to the community, where it will be assembled to create different kinds of “taka” (papier mache).

### 2.3: Preparation for Taka (Paper Mache) Community partners

**2.3.1. Planning to Taka (Paper Mache):** The community will introduce participants to the “Taka Project.” Taka (Paper mache) is a very useful crafting technique for various objects, from masks to figures such as Angels and Santa Claus. What is needed in doing this project is a little practice, dedication, and creativity to create beautiful products from used papers. The community members who are recipients and participants will be encouraged to practice properly putting the paper and mixing *gaw-gaw* (corn starch) water-based glue from start to finish.

**2.3.2. Construction of the Taka (Paper Mache):** Participants will learn how to place the shredded or torn pieces of paper into a mold to form their Taka (Paper Mache). Note that the sizes of the paper will depend on its texture and thickness, as well as the size of the desired products. The participants should learn to consistently apply the glue (*gaw-gaw*) to the paper for the product to become sturdy. The drying process of the product will depend on how big or thick it is, as it can dry overnight or within 24 hours. That is why a mechanical dryer is an alternative to this process.

**2.4.3. Finishing of the Taka (Paper Mache):** Once the Taka (Paper Mache) has dried, the maker will do the finishing touches, such as sanding, painting, and adding the finishing touches to their product.

**2.4.4. Selling of the Taka (Paper Mache):** There are some possible options in the community marketing of the Finish products. First, they will help the marketing students sell their products by teaching them different marketing strategies. Second, the community will tie up with the local dealers of products in Divisoria Market to sell their products. Lastly, they will open a community store in the different historical places in Manila and sell it to tourists.

## MATERIALS

3.1. Different kinds of papers:

Newspapers, Bond Paper, Books, and Magazines

3.2. Flour or *Gaw-gaw* (corn starch) mixture

3.3. Wood mold (for different figures such as Mask, Angels, Santa Claus, Humans, and animals)

3.4. Different colors of Paints (based on the products)

3.5. Different sizes of Paintbrushes (for production and painting)

3.6. Dryer (serves as an alternative to dry the raw products after they are cast into wooden molds.

3.7. Cutter, scissors, and sandpaper

## EXPECTED OUTCOMES

By the end of this project, the participants will better understand the art of paper mache and can create their own unique (*papier mache*) products. They will understand and value their work as a big contributor to reducing the impact of climate change on the environment. They are not just learning skills in making, designing, finishing, and selling their products as a community but also a way of elevating their dignity and rights as a good steward of the whole creation. Hopefully, this “Taka Project” will open an opportunity for the community to have a sustainable livelihood program for the poorest of the poor in the area.

## BUDGET

The cost for this project will vary depending on the number of wooden molds and the materials needed for the “Taka Project.” To inaugurate the project, the estimated cost for all basic materials needed is roughly seventy to a hundred thousand pesos.

## TIMELINE

The training of the participants in this “Taka Project” will happen in a different session. Participants will be trained in making the “Taka” (Paper Mache) in one to two sessions. The first training in “Taka” (Paper Mache) making: from cutting the different sizes of paper, proper application of gaw-gaw, putting paper to the wooden mold, and drying the “Taka” (*this will depend on the density of the Taka and the amount of time needed for drying*), removing from the mold. Second is the other training for those individuals assigned to painting the products. (Painting the product is necessary to make it more colorful, i.e., Santa Claus and Angels) Three to four weeks is enough time to prepare the participant’s training and the community recipients before it starts.

## CONCLUSION

As we look at this research, paper is one of society’s most commonly used products, second to plastic globally. Despite the dangers posed by paper production, humanity still thinks of paper as “biodegradable,” which leads to reckless consumption. Nevertheless, we are too naive about the notion of “biodegradable.” We cannot see that paper production poses a great threat to the environment. Studies show that the negative effects of paper waste account for around 26% of total waste in landfills, and its production causes deforestation, uses enormous amounts of energy and water, and contributes to air pollution and waste problems. However, recycling paper is another way to reduce the impact of climate change. Paper recycling helps us reduce greenhouse gas emissions by 70%, and less energy and water are used in recycling paper than in creating new paper from trees. According to the Environmental Protection Agency, recycling one ton of paper saves 17 trees and more than 3.3 cubic yards of landfill space manufactured with recycled paper, which can reduce the effect of pollution that contributes to smog, which is very harmful to health.

The Ecological Solid Waste Management Act of the Philippines suggests that society’s reduction of garbage should start where it is coming from, or the strategy of “source reduction,” in every local government unit (LGU). However, this is not enough to reduce the garbage crisis in the Philippines because people still lack education about segregating and reducing garbage at home. Hence, it is not enough that we are just aware of the notion of Pope Francis that “climate change is a global problem with grave implications for the environment and to the cry of the poor, who are least responsible for causing the environmental problem but the most affected by the ecological crisis we have in this world. Let us remember that humanity is solely responsible for whatever ecological crisis is on the planet, which is why we should act as a community. This is the right time for a win-win solution for the environment and humanity, especially the poor. It is the perfect time to change our perspective and ideology from an anthropocentric to a concentric paradigm as we reinterpret our rights to “subdue and dominion” the world irresponsibly. We must imbibe the spirituality of stewardship and remember that God is the “Creator and owner of all things that existed in the world, the one sustaining everything with the Spirit that gives life to the whole creation. This God is the source of our power and wealth that humanity keeps on bragging about, and most of all, we are responsible stewards of the world and humanity. This “Taka Project” is a concrete communal response to Pope Encyclical Laudato Si, “Hearing the cry of the earth is hearing the cry of the poor,” to give a possible way for communities to explore and look to repurpose their paper trash. The Taka Project provides a concrete opportunity for the participants’ community as they learn the techniques of creating products out of the trash and find a way to help the community, the environment, and the whole world—our only home.

## RECOMMENDATION

Humanity has the responsibility to be good stewards as we are invited by the creator to promote, care for, and protect the whole creation. There are so many ways to fulfill our Christian responsibility through to waste management and circularity which aims to eliminate paper waste to reduce pollution. Repurposing waste products and using them as materials to regenerate our ecosystem naturally. The “TAKA Project” is one of the best examples of how Christians can put this principle into practice and abandon the “throw away culture.” This project is a proposal at the school level going to the local community that envisions a future characterized by responsible students and people with environmental stewardship committed to making a positive impact by maintaining their surroundings by transforming waste into valuable resources. In some sense, the Taka Project follows a circular economy approach by collecting and sorting waste materials from the school to the communal level, especially paper waste. Recycling and repurposing the collected materials into new products, such as Christmas decor, engages students and the local community in environmental stewardship activities like beach cleanups and tree planting. The school’s mission is to educate people about the importance of responsible waste management and a circular economy in society. Hence, the implementation of TAKA Project in the local community as well as other communal projects, such as clean up drive, tree planting and garbage segregation at home is a good step to be good stewards of God’s creation. Collective communal action and commitment to the principle stewardship through circular economy, we can reduce waste, protect, and promote the environment, to create a more sustainable future for the next generation.

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