



Promotio Iustitiae

Social Justice and Ecology Secretariat (SJES), General Curia of the Society of Jesus, Rome, Italy

The Cries of the Forest & Air And the Cry of the Poor



Cover Images: Above - From the corridor of Fr. General designed by Arturo Araujo SJ (USA); Below - From SJES Archives. **Design:** Rakesh Mondol SJ (CCU)

The Cries of the Forest & Air And the Cry of the Poor



Social Justice and Ecology Secretariat (SJES)
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Fr. General's Conversation with Conference Social Delegates, GIAN Leaders and Advisory Committee members of SJES during the Annual SJES Meeting, 13 May 2022

RP Arturo Sosa SJ

Thank you very much for sending me the questions and areas of your concern for clarification and deepening in advance. Without going into every question or concern you have raised, allow me to share my initial thoughts upon reading them. Later, we will probably have an opportunity to discuss specific questions you may want further clarified.

I. How can the UAPs and Governance Structures Support Our Life-Mission?

Let me start with the big picture of our life-mission. We spent six years trying to find a word to put both notions, life and mission, together. We used "and" initially, but later I thought of putting it this way: life-mission, uniting both ideas using a dash. We realise that our life is a mission, and mission is life. We cannot live meaningfully without a mission, and we cannot live the mission without the gift of life. So, our starting point is a grateful commitment to the life-mission, and the Universal Apostolic Preferences (UAPs) strengthen this commitment.

Let me say a few words about the Universal Apostolic Preferences: Some of

you may remember that GC 34 (D21, § 28) asked Fr. Kolvenbach to put forward some "priorities" for the Society. The GC used the word "priorities." By then, the number of Jesuits and apostolic resources had diminished. It took Fr. Kolvenbach a lot of time, almost ten years, to fully respond to this particular call of GC 34. An astute linguist, mindful of every word he used, he never used the word "priorities." Instead, he used "preferences." There is a radical distinction between priorities and preferences.

When one is in this position, discerning the worldwide body of the Society, and ponders, "can we have common apostolic priorities and strategies for the whole Society?" No. To have a "priority" will go against the Society's intuition. We are one body with great diversity, always eager to have one's feet on the ground given a specific context.

I suppose you are familiar with the history of the Constitutions of the Society of Jesus. St. Ignatius was very reluctant to write the Constitutions of the Society. For him, a person's choice to commit to the Society's mission is enough. We do not need laws. But finally, he proceeded, "as the Church

asks it of us, I will write the Constitutions." And it took him a long time to do so.

Also, Ignatius had the impression that the law was rigid, so he always made amendments. However, these consist of considerations for persons, times, and places, which I believe, is an essential criterion for us. Every orientation and law must always be flexible because persons, times, and places are diverse. And we cannot bring everyone to the same action, in the exact moment, and into the same process.

To use the word "preferences" and not "priorities" means providing orientations that inspire everything the Society does. Other possibilities are not eliminated if the term "preferences" is used. Fr. Kolvenbach used "preferences" and identified five universal commitments of the Society, five apostolates that all Jesuits and apostolic undertakings of the Society should support. Namely, the geographical regions of China and Africa, the inter-provincial houses in Rome, the intellectual apostolate, and the refugees and migrants. These were areas of apostolic work to be supported by the whole Society. But, from 2005 to 2019, several changes arose in the Society during the formulation of the apostolic preferences. Consequently, under the word "preferences," apostolic works, which the whole body of the Society should support, are not proposed. Instead, preferences are orientations for every apostolic work and the life-mission where the Society is present. Therefore, the UAPs emerged in 1995 through personal reflection and consultation, which GC 34 had asked of Fr. General.

In 2016 however, the GC 36 asked that the preferences be established based on the

existing ones. What turned out innovative was the process, requested by the same GC, to work them out: an inclusive process of the whole body of the Society, not limited to Jesuits alone, but determining the preferences with the contribution of others. It involved a discernment process at various levels of the Society, which the Pope finally confirmed. It is similar to the time of the Society's foundation when the Pope approved the Formula of the Institute. In 1539, the first companions drafted a document of what they wanted to be as the Society of Jesus. That document eventually came to the Pope, and on 27 September 1540, Pope Paul III said, "Yes, this is the Formula of the Society of Jesus," and signed the text, thus making it a document of the Pope.

Now, we have something similar. Pope Francis was part of the process as he was constantly informed, participated in its organisation, and confirmed its outcome. The Pope used the word "confirmation" to indicate that the Universal Apostolic Preferences are the fruit of spiritual discernment in common. Therefore, our life-mission should incorporate its different dimensions. Our life-mission expresses what previous GCs, confirmed to be our focus: the promotion of the faith that does justice, the dialogue with other cultures and religions, "with others, in a mission of reconciliation and justice," and the Universal Apostolic Preferences.

Now we face the enormous challenge of organising ourselves, of creating governance structures that can help us accomplish our vital mission. And again, we are facing a very complex dimension. According to the General Congregation, the Society's governance needs to consider

the human person: it has to be personal, spiritual, and apostolic.

There is a traditional way of reconciliation within the Society. Persons are not mere numbers – persons are persons, each unique or distinct, requiring respectful care and concern. The governance structure must understand that we work with human persons. And the person who governs is also a sinner, susceptible to making mistakes.

So, careful attention to the personal and spiritual is not simply a strategic way of governing; it is also about apostolic governance, subject to the leaders. The mission is its focus.

a) A way of proceeding:

From life-mission to UAPs and governance, we now arrive at our way of proceeding. GC36, D2, § 3 mentions four characteristics of our way of proceeding: **1) discernment** that is connected to spiritual life and being in touch with something different within us, **2) apostolic planning**, wherein spiritual discernment is the basis for an apostolic plan, and we do not do strategic planning, **3) collaboration**, and **4) networking**. These are the four dimensions of our way of proceeding at this moment. We try to understand the consequences of putting this in our daily life. But, of course, they are always in tension.

b) Always in tension: because it is always a work in process:

Decree 2 of GC35, 'A Fire that Kindles other Fires', has a beautiful paragraph that describes the life of the apostolic body of the Society as having plenty of tensions. If we took out the tensions, we would kill the apostolic body. So, we live in tension, and

we need to "live this tension between prayer and action, mysticism and service." (GC 35, D2, § 9). If it were not for these polarities, we would be just supporting one of the polarities, which is easy. Living in this tension changes everything, and this way of proceeding always means the work is in progress. It is an ongoing process, never finished.

A few weeks ago, I was talking with our Jesuit scholastics. In the conversation, a question that came repeatedly was, "why don't we have a roadmap for putting into practice the UAPs?" And my reaction was: No because if we have a roadmap, we would be in charge and would not be discerning. Once we have a roadmap, we would confine the Spirit into "our" roadmap. To follow the Spirit means that we do not have a roadmap. For this reason, we are always open and trying to understand.

I see two perfect examples in the Bible. First is Abraham's story. Abraham was a very wealthy old man, and the Lord told him, "Leave everything behind and walk!" Like a typical Jesuit, Abraham asked, "Where? Give me a roadmap." And the Lord replied, "Just walk, and I will tell you." It is not easy. Not easy for a person with intellectual formation, not easy for one already convinced with what he must do. This kind of freedom regarding our plans is so important.

Another example is Paul. We read in the liturgy about the conversion of Saul of Tarsus. Saul was stubborn and convinced about what he wanted to do; he had his plan. He was going to Damascus to wipe out the new Christian Church, which was destroying the real religion he believed in. And along the way, a blinding light struck

him; Saul fell off his horse and, from that point, could not see anymore and could not walk on his own. So, finally, he arrived in Damascus, a blind man led by others.

Meanwhile, Jesus had a plan. He appeared in a vision to Ananias, a disciple in Damascus, to baptise and restore Saul's eyesight. Ananias protested, "That man? He is killing us!" But Jesus repeated his command saying, "I have chosen Saul for a new mission to bring my name before Gentiles and kings and before the people of Israel (Acts 9:15)". Ananias eventually laid his hands on Saul. Saul then could see, became converted, and changed his name to Paul. He no longer had his roadmap but a map given by God.

Right now, we are in the process of restructuring the Society of Jesus. We have a long and heavy tradition of Provinces. So, when you meet a Jesuit - "I am Arturo Sosa from the Venezuelan Province" - nobody says, "I am Arturo Sosa from the Society of Jesus." We spontaneously identify with a Province; it is nice but dangerous because Provinces are a temporal way of understanding ourselves. We are not a "federation" of Provinces. The Society of Jesus organised itself into Provinces, the best way to organise at that time. And now, we are in the process of rethinking Provinces and our way of organising ourselves. The Conference of Major Superiors is a new structure. It is not an executive structure but a discernment structure. So, the Conference of Major Superiors is not at the intermediate level between the General and the local apostolic works. Nevertheless, it is a space where a group of persons responsible for a region discern and coordinate interprovincial apostolates and commitments.

For example, our Jesuit formation now is more or less in the hands of the Conferences and not the Provinces. When I joined the Society a long time ago, 55 years ago, the idea was that each Province holds the formation process. At this moment, no Province has all the formation process within itself. This gives another shape to the formation process. Also, it helps to coordinate other ways of doing the apostolate. The opposite is maybe JRS, an international apostolate; that is the tension always with the Provinces, the Conferences, and everybody because JRS is a structure that did not come from the Provinces nor Conferences but from an international way of doing things.

So, there is this tension, and we keep looking for different solutions. Sometimes, we also do not know how to understand the development of the tensions. For example, one may ask, who is Xavier Jeyaraj? He is the Secretary for Social Justice. Secretary to whom? It is to Fr. General. Historically, Fr. Arrupe appointed a secretary to help him promote the social apostolate all over the Society. But, Jeyaraj, Pia, and Valery call themselves the "Secretariat". So, linguistically we are moving from a secretary to a secretariat.

Still another example. We use the term "lay collaborators" or "collaborators" all the time, especially in English. This divides the work between Jesuits and collaborators. But such is not the idea of collaboration. The concept of collaboration is quite different; it starts from the conversion of Jesuits so that the Jesuits could understand themselves as "collaborators." But it is not easy. It is a question of identity. And, in English, there is a nice word - "mission partners"- which is very different when we talk about collaborators.

I always remember one of my first visits to Peru. It was a lovely meeting of Jesuits and other mission partners. All the mission partners had an identification card that said "collaborators." But no Jesuit had an identification card that said "collaborator." So I candidly commented, "I am disturbed because, in this Province, no Jesuits are collaborators!" Notice that collaboration is another considerable challenge. I will talk about that later.

So, in the Society of Jesus, we have Provinces and Regions for administrative and executive functions and another structure for *coordination*. And for coordination, the most important ones are the Conferences and the Secretaries. There are four apostolic secretaries for different apostolic areas. So, this gives you an idea of the complexity of the processes we are in.

I now move to my second point on Society's mission and the social apostolate.

II. Society's Mission and Social Apostolate:

a) Social dimension - Social commitment:

The Society of Jesus cannot accomplish its mission without a solid social apostolate. And most of you very well know the tension in the discussion on the social dimension and social commitment in apostolic works. We agree that the social dimension is critical for every apostolic work, but it is not enough. Social commitment is needed. We need to evaluate this, which is part of the coordination of the social apostolate. This is the task for you: how do we evaluate social commitment within the Society of Jesus?

Besides, how we understand our terms and ourselves is essential. For example, I avoid using the word "apostolic sector." Based on my experience, if we use it, we divide the Society of Jesus into different types of work. But the apostolic body of the Society is not a "federation" of independent apostolic sectors. I often use the word "apostolic area," and of course, we have to coordinate similar apostolic works that can help each other. But we cannot divide our apostolic works. For example, we cannot understand the social apostolate apart from the higher education apostolate. There needs to be mutual collaboration.

How we understand our social commitment is vital. Social commitment is not only about living in a *barrio* (slum). You can live in a *barrio* and have no social commitment; you may live outside the *barrio* yet have a strong sense of social commitment. So, understanding and evaluating our social commitments is something that we all have to reflect on.

b) Social work - Social analysis: Basis for the advocacy

We associate social work with social analysis. I think we all want to have more people engaged in social work. But I dream of having more people involved in social analysis, taking into account the intellectual dimension of our apostolate. We are not only social workers; we cannot be satisfied just doing good social work; we need to think about it and analyse it. At this moment in the history of humanity, this is a real challenge – how do we think through alternatives for social relationships?

For example, we have our experience of the pandemic. As you remember, at the beginning of the pandemic, everybody talked about unjust social structures. It was

the opportunity to change the social structures. A year later, no one talks about it anymore. The message now is, "Let us go **BACK** to normal." No one speaks about changing social structures. And nobody is looking at the tension and calling for a fundamental change in the systems. The pandemic was the result of a much bigger unjust social structure. Take the example of Education. How many steps backwards have we taken these past two years in providing proper or quality Education? Also, the distribution of the vaccines was a scandal. So, we must think, propose, and experiment with new, alternative social relationships, especially in politics.

c) Political Action: The 'best politics' of *Fratelli Tutti*

Today we are facing a real crisis of democracy all over the world. For example, last week, the results of the Philippine elections were shocking, especially the winning proportions. All over the world, we find polarisation usually about persons rather than programs or social dreams. I think politics is a real challenge for our apostolic work. The encyclical *Fratelli Tutti and the road beyond* should be made known to more of us. The Pope talks about the "best politics" and is committed to that. Thus, we need to promote universal citizenship and advocacy.

Advocacy is the process of thinking and promoting new ways of understanding our social relationships, global structures, and political commitment. Building a democratic political and social subject based on informed, organised, active, and peaceful citizen participation is a real challenge for us. It is impossible to do this when we are not present on the ground because this is not only about having ideas

but having experiences in empowering people. Empowering people means enabling citizens to organise and participate in a democratic process in this unjust social order.

The biggest challenge for us on this horizon is shaping the formation of Jesuits and partners; how do we form ourselves for commitment to the life-mission? The UAPs are the focus and way to create the formation process for Jesuits and mission partners because we are the same subject in this process.

III. A *mínima Compañía de Jesús colaboradora*: the most urgent challenge in the next years

Let me move to my third point. Some of you are familiar with Ignatius's way of concluding many of his letters, saying, "*mínima Compañía de Jesús*." He wrote "*mínima*," not because of numbers. When Ignatius wrote this, the Society's membership was growing very fast. Thus, "*mínima*" is linked with the idea of humility – the "humble Society of Jesus" (*Compañía de Jesús humilde*). Usually, we are not known for our humility. But this is the core of our spirituality: we follow Jesus, poor and humble. And to be poor and humble always comes together in the Spiritual Exercises. In the meditation on The Two Standards, poverty is only the first step to humility; the goal is not poverty but humility. To make ourselves poor means to be interiorly free and not inordinately attached to anything in the world. That is the first step to humility: we prepare to become humble. We must be humble as a group and as an apostolic body, the "*mínima Compañía de Jesús*."

And, with all due respect to the Society's founder, I want to add another word to that phrase: "*mínima Compañía de Jesús colaboradora*." To be a collaborator starts with being humble. If you are not humble, you cannot collaborate. If the Society of Jesus cannot be humble, we cannot collaborate.

I think the current challenge for the Society is to understand and live collaboration as an essential dimension of the identity of all members of the apostolic body. By "all members," I mean all Jesuits and mission partners. So, in this sense, we talk about the apostolic body. And the apostolic body does not refer only to the Jesuits, the religious body; the apostolic body is wider than the Jesuits. The apostolic body is the "*mínima Compañía de Jesús colaboradora*." A question that we must deepen for our response is, "Who is a member of the apostolic body?" More or less, we know who the members are of the *Society of Jesus*. We have catalogues and a database of the Jesuits and a long process of becoming a member. But we do not yet have a clear shared understanding of what or who is a "partner in the mission." It involves a process that we need to deepen.

Some of you may remember some experiences and instances of legal engagement in the Society before GC34. And GC34 made a challenging debate about that, and the conclusion was, "No, that is not the way—associating lay persons into the Society is not the way." So we have to find another way. Collaboration is not to create a religious order that can include lay persons.

a) Collaboration is an essential dimension of identity for all members of the apostolic body

We have done many things. And my impression is that, in reality, we have many collaboration experiences, which is good. We are not starting with the idea but with the experience. But we still need to put together the experience and what we think about and create processes for that. For example, being an employee of a Jesuit institution is not the same as being a partner in a mission. Still, in our language, we call "collaborators" everyone working in the apostolates. But it is not. Becoming a mission partner first requires a process of discernment and election. The person has to desire to be a partner, and the body has to decide to have him as a partner. When you join the Society as a religious, you ask, "can I be a Jesuit?" And the Jesuits say, "yes, you can be a Jesuit, but we will respond to you 20 or more years ahead." So, you enter as a novice, and 20 years later, you pronounce your final vows; they then will say, "you are a Jesuit now." It is a very long process. Maybe you don't need 20 years, but you need some process to say, "this person wants to be a partner" and, "this person is a partner." So, one has to be accepted by the body as a partner. And how do we do that?

For the Jesuits, there is a detailed process for doing that. A lot of time, energy, and money are invested before it can finally be said, "you are a Jesuit, and you can incorporate yourself into the Society. Thus, we must continue thinking about how we constitute the apostolic body - the *Compañía de Jesús colaboradora*.

b) Who is a member of the apostolic body? Is it the same as the "Ignatian family"?

The *Compañía de Jesús colaboradora* is different from the "Ignatian family." The Ignatian family is another cloud; The Ignatian family is not the apostolic body of the Society. They are spiritual people inspired by what we call "Ignatian Spirituality." We have a lot of religious women and men and a lot of lay people, a lot of movements like Christian Life Community (CLC) and many others, all of them inspired by Ignatian spirituality- this is what we call the "Ignatian family."

There was a lovely gathering of the Ignatian family in Marseille, France, in October 2021. There were around 10,000 people from so many different movements; they felt they were part of the same family and were part of the same culture or nation. But this is not the apostolic body of the Society of Jesus.

Whenever I hear of "Ignatian family" or "Ignatian spirituality," I suppose St. Ignatius of Loyola must be turning in his tomb because he fought all his life not to identify the first companions of the Society as "Ignatian." When he asked Pope Paul III to approve the Society officially, he wrote, "we want to be called the "Society of Jesus." If you go around the religious families, you will typically find that the name of their congregation is associated with the name of their founder. But Ignatius was very much against that, and thank God because we can say that the Society was founded by Jesus, not by Ignatius, and Jesus will take care of it!

The apostolic body is not an Ignatian apostolic body. Our centre is Jesus Christ

and not Ignatius. Also, Ignatius indicated in Part IX of the Constitutions that "the General of the Society is the head," and I say, NO, the General of the Society should not be the head. The head of the Society is Jesus Christ. And the General of the Society is the neck, the connection between the head and the body. Ignatius says that he is the head, but when he describes the responsibilities of the General of the Society..." the first responsibility of the General of the Society is to pray, so the body has the grace it needs to accomplish the mission." So, the neck is the connection, and the grace comes from the head, Jesus Christ and the Trinity.

So, how we understand collaboration entails avoiding 'brand names' - we are not McDonald's, we are not Coca-Cola - we are something very different. We take the criteria I mentioned seriously: places, times, and persons. Attention to these criteria is a challenge, and the great thing about the Society is that we have the same identity and commitment. Still, you are committed to adapting your ways to the particulars of wherever you are on a mission, when you are on a mission, and whoever you accompany and serve in the mission.

In our next enlarged council of Fr. General, we will reflect on this theme, collaboration -- our understanding of it and its consequences.

IV. IV. Networking is a work in progress

a) There is a considerable diversity of experiences

Finally, concerning networking. Networking is a "work in progress." It is not a linear, straight road but a

mountainous road. There is enormous diversity in networking experiences within the Society. When we look back at our history, 30 years ago, there was no networking. I think it was Michael Czerny, then the secretary for Social Justice, who had the first document on networking.

The first considerable difficulty is how to collaborate and network within the Society, to have something like the network of [Jesuit] Universities in the United States or Latin America. Or something like the primary and secondary education network that has been doing this work for many years. Yet we are not satisfied. We have a long way to go to have a network as an apostolic body in the sense of the network of our academic institutions.

We are learning how to take advantage of working in different apostolic areas through networking. And I think this is also a challenge for the social apostolate: how to have a network. It is not only to be together annually but to exchange experiences on how networking can make a difference and impact society. I associate this enormous challenge with the word "*Magis*" - *Magis*, as a tension of our spirituality, means we can do "more" and "better". And I think networking is a way for us to do more and better, and our vast experiences can support it.

Finally, identity is a big issue. If this networking does not give us a real identity - a link to our mission and life - we can have an outstanding network in various fields, but we cannot have the impact we want. These ideas came to mind as I read your questions and points. Thank you.

Original in English



Editorial

Xavier Jeyaraj SJ

The COP27 climate convention in Sharm-el-Sheikh, Egypt, has just ended. There were some small successes amidst plenty of anxious moments, tears and frustrations, especially from our youth. But the pursuit of climate justice continues for every one of us. Our every experience of the crises must inspire us to engage more critically, with a sense of urgency, hope and unity, in creating climate consciousness, advocacy, and collective action.

Climate change is an existential threat to all beings. Air pollution is a major worldwide concern affecting humans, particularly the poor, and all species on earth. Studies have revealed a close link between Covid-19 deaths in the last two years and other diseases associated with long-term exposure to fine Particulate Matter (PM2.5) in the air. Global emissions have grown about 70 times since the pre-industrial era, taking the world to a catastrophic temperature rise. Yet, world leaders keep denying the scientific facts, talking loud while doing little, or passing the bug on to others without a radical change in attitude and policies.

The relationship between forest and air is bilateral. *The State of the World's Forests 2020* says, "Forests cover 31 per cent of the global land area but are not equally

distributed around the globe. More than half of the world's forests are found in only five countries (Brazil, Canada, China, Russia and USA)." Forests provide shelter, livelihood, water, food and fuel. While some of the benefits of forests are obvious, like fruits, vegetation and wood, others are less obvious such as medicines and cosmetics. The livelihoods of almost 1.6 billion people, most of them indigenous, depend on forests. Besides, forests are home to nearly half the species on land. After oceans, forests absorb harmful greenhouse gases and help purify the air, reducing the pollutants' intensity and toxicity. In addition, forests capture and store carbon, provide clean water, serve as a buffer in natural disasters like floods, and prevent soil erosion. Yet, where poverty is high, millions of people practice collecting fuelwood or producing charcoal.

Nevertheless, deforestation and illegal logging continue to happen at alarming rates worldwide, contributing to biodiversity loss. Every year more than 10 million hectares of forest are destroyed. Large-scale commercial agriculture, particularly cattle ranching and soya bean and oil palm cultivation, account for 40% of tropical deforestation. Air contamination due to hazardous chemicals, gases and particles in the atmosphere cause illnesses, allergies and death, not only to humans but

also to other living species and food crops that enter the system. Chernobyl, Bhopal and Fukushima gas tragedies reveal the politics behind such disasters and the harm that can happen to anyone, especially the poor, who are always the victims of environmental calamities.

The last two issues of *Promotio Iustitiae* were on 'The Cry of Water and the Poor' (PI 132) and 'The Cry of Land and the Poor' (PI 133). Continuing the series of reflections on the cries of water, land and the poor, this issue (PI 134) focuses on "**The Cries of the Forest & Air and the Cry of the Poor**". Fifteen authors share their views, reflections and actions based on diverse experiences of the geopolitical contexts, particularly in the three 'lungs' of the earth - Amazon (Brazil, Colombia), Congo Basin (DRC, Cameroon & Kenya) and Asian forests (India, Philippines) and also Boreal regions. They share the theological understanding, spirituality, socio-economic and political realities and constraints and the importance of forests and biodiversity for the survival of the planet.

Through these reflective articles, we wish to listen attentively to the groans of our

earth with all its creations, especially the trees, plants, birds, animals, insects etc., and the anguished cries of the poor. The poor would encompass particularly the young, the women, the children and the vulnerable communities, predominantly the indigenous, who often get dispossessed of their rich natural and mineral resources for their future.

The ecological crisis is getting worse daily. We realise that it would be impossible to resolve this global crisis only through science and technology or even through economic or political powers. It is not simply about climate change mitigation, adaptation, or financial commitments such as the 'Loss and Damages Fund' as agreed by COP27 participants. These efforts would be inadequate if there is no fundamental change in our approach to nature. Real change will happen only if there is a complete paradigm shift in our attitudes, spirituality, lives and lifestyles and a revamping of the entire socio-economic, political and cultural system of administration of the environment. We are on the verge of a global catastrophe that needs to be handled collectively and comprehensively.

Original in English



Pastoral Letter: “A New Creation in Christ” - Dreams for the Boreal Region of Northern Ontario

Archbishop Terrence Prendergast SJ

Apostolic Administrator, Hearst-Moosonee Diocese, Canada

Published on Pentecost, June 5, 2022

Dear sisters and brothers in Christ:

In this Diocese of Hearst-Moosonee, we live in the boreal region of northern Ontario. This is our homeland. This is where we pray and work, play and rest. This is where we raise our families. Named after *Boreas*, the Greek god of the north wind, it is a land of vast boreal forests and wetlands, abundant lakes, rivers, and streams abounding in fresh water.

Wildlife and fish flourish. Each spring we welcome the return of the Canada geese and countless other birds that nest and raise their young in our lands. Our winters are cold and brilliant with sun. Our night skies dance with the *aurora borealis*. The boreal region sustains us and gives us life. It defines our imagination. It is where God is at home. It is where God continues to reveal himself and his plan of salvation to us.

Our boreal homeland is tucked between the arctic tundra to the north and the temperate forests to the south. Circling the northern globe, the circumpolar boreal region drapes the earth in a halo of green and blue. The coniferous pine, spruce, larch, and fir mix with the deciduous birch,

aspen, and poplar to create one of the earth’s great forest biomes.

Home to a third of the globe’s boreal forest, the Canadian boreal region stretches from the Atlantic coasts of Newfoundland and Labrador, across northern Canada to the Northwest and Yukon Territories. In the north of our homeland lies the Hudson Bay Lowlands, the world’s second largest peatland complex. The rest of the world’s boreal forest stretches across the vast sweep of Russia, Alaska and Scandinavia.

Recently, the universal Church focused its attention on another great forest region of the world, the tropical forests of the Amazon Basin of South America. In response to the 2019 Synod on the Amazon, Pope Francis shared his reflections in the post-synodal address entitled *Querida Amazonia* (“Beloved Amazonia”). His opening statement offered a fresh vision of our natural world: “The beloved Amazon region stands before the world in all its splendour, its drama, and its mystery. God granted us the grace of focusing on that region ...” (Post-Synodal Apostolic Exhortation, *Querida Amazonia* [February 2, 2020] § 1).

In *Querida Amazonia*, the Holy Father sketched out four dreams for the Amazon Region: a social dream, a cultural dream, an ecological dream, and an ecclesial dream. A social dream that longs to promote the dignity of the poor, the Indigenous peoples, the least of those whose voices are never heard; a cultural dream that respects and empowers a rich cultural diversity; an ecological dream that nourishes and protects life and natural beauty; and an ecclesial dream that seeks to incarnate an Amazonian vision of holiness within the universal Church.

This four-tiered dream recognizes the complexity of what the Pope calls an “integral ecology” (Encyclical Letter, *Laudato Si’* (LS, May 24, 2015), chapter 4, §§137-162) that recognizes that everything is interrelated and interconnected (LS §138). Pope Francis stressed that “we are not faced with two separate crises, one environmental and the other social, but rather with one complex crisis which is both social and environmental” (LS §139). In other words, integral ecology seeks a three-fold reconciliation; reconciliation with God, reconciliation with others, and reconciliation with all creation.

As the members of the Church of boreal Northern Ontario, I invite you to join with me so we can focus our attention on our boreal homeland. Together let us seek what God is revealing to us in and through the breath and beauty of our lands and waters.

Let us, dear brothers and sisters, imagine what might happen if we viewed our boreal homeland with the same comprehensive, integral dream offered by the universal Church in Pope Francis’s vision of the Amazon! Imagine if we referred to the boreal region as the “beloved boreal,” to the Hudson Bay

lowlands as the “beloved Hudson Bay lowlands.” What dreams, what possibilities would emerge if we used different words to speak about this region in which we live?

Could we go so far as to imagine the boreal region as our common home, given to us in the boundless and fecund love of God? Could we then imagine our boreal home as our place where we experience Christ’s blessing of salvation, as a place of splendour, drama, and mystery, a place where God calls us to be saved? Could we imagine the boreal region as opening us up to the mystery of God’s creative grace? Could we ever imagine our boreal homeland not as “a problem to be solved, [but as] a joyful mystery to be contemplated with gladness and with praise”? (LS §12)

What do we dream for our boreal homeland? Indigenous communities have the custom when making decisions, to ask what our decisions today will mean for the seventh generation following us. What do we wish to pass on to the seventh generation? What does “integral ecology” look like in the boreal region of northern Ontario?

What is God, the Creator who dwells as the Holy Trinity, revealing to us in this great land of ours? What does the Creator wish to share with us?

How are we being called to care for this common home in northern Ontario?

How we envision our homeland will determine what we value. Our values determine the breadth of our visions, the questions we are capable of posing. In one perspective, we hear of a land that is sparsely-peopled and composed only of bush and swamp. In other contexts, we

hear of a region rich in natural resources - a vast wilderness land flush with untapped economic and mineral potential.

We hear of a carbon-rich ecosystem that must be protected for the sake of climate change and planetary life. We hear of a wilderness without roads, an ecologically functional boreal wilderness that needs to be preserved and protected. We hear of a homeland, of Indigenous peoples, of settlers, of a diverse people whose roots run deep in our land.

Different people have diverse perspectives regarding the “value” of our boreal homeland. Given our diverse visions and dreams for the boreal region, not all perspectives are in harmony with each other. In other words, the boreal landscape is a “contested landscape” (The Canadian Senate, in their boreal forest report of June 1999 recognized the “competing realities” of the Canadian boreal forest.)

Multiple visions vie for attention – visions of great mineral wealth and profit, visions of global climate change regulation, visions of healthy and vibrant human communities, visions of protected areas and conservation, visions of a homeland for healthy wildlife, and many more. How to integrate these different visions into an integral ecology as offered by *Laudato Si’* – I suggest to you that that is our challenge.

Our Catholic heritage and tradition open us up to many possible dreams. Consider how we have come to imagine the self-revelation of God. We contemplate the mystery of God as the Triune mystery. In our Nicene Creed we profess that we believe in God the Father, *maker of heaven and earth, of all things visible and invisible*; we believe in Jesus Christ, *through whom all things were made*, and we believe in the Holy Spirit, *the Lord, the giver of life*. For

countless generations we have professed our belief in this God, who is the Creator. For our Christian tradition, this has meant the Trinitarian Creator.

What does it mean that God has chosen to be revealed as the Creator God? Why as the Trinitarian Creator? Our boreal homeland, the beautifully crafted gift of the creative love of God, is now before us, in all its sacred wonder. It is our homeland, yes, but even more profoundly, it is God’s homeland for us, created in love and fruitfulness.

Our boreal homeland has a mission. Our boreal homeland can be a pathway to God. It can be a source of contemplation that leads us to prayer and worship; a sign, a path on our pilgrimage here on earth.

The boreal region is our promised homeland, our Garden of Eden, the place where we find salvation, the place that calls us to faith, hope and love. It is a constant source of life, strength and healing for our people, a daily source of joy and meaning.

Our boreal forests, our coastal tundra, our wetlands, our rivers, and our lakes have all become our “inscape” that is, “the unique essence or inner nature of a person, place, thing, or event, especially depicted in poetry or a work of art” (cf. *Oxford Dictionary* on line. The notion of “inscape” is particularly well-developed in the poetry of the Jesuit Romantic poet, Gerard Manley Hopkins [1844-1889]).

All landscapes, if lived in long enough, become “inscapes”. Spaces becomes places—places of meaning, places of salvation. They define our visions, what questions we pose, what dreams we contemplate. Maybe that’s why people who have an indigenous intimacy with

lands and waters, skies, and seas, have come to a depth of wisdom.

The boreal land can no longer be simply “swamp and bush” but rather must become a home, a place where wisdom lies, a place that elicits dreams and hopes. Of particular concern is our care for Indigenous communities and their cultural traditions in the northern boreal region. As Pope Francis noted “[Indigenous peoples] are not merely one minority among others, but should be the principal dialogue partners, especially when large projects affecting their land are proposed” (LS § 146). For Indigenous people, land is not a commodity but rather a gift from God and from their ancestors who rest there, a sacred space that defines their identity and values.

The Church of Christ was born in the spiritual fire of Pentecost. Followers of Christ, emboldened and animated by the Holy Spirit, the Giver of Life, spoke a language understood by all. Perhaps now is the time for us to experience our own New Pentecost in northern Ontario.

The Creator has given us these lands and waters of life. Let us begin to speak of the myriad ways in which the Creator God is

present and active in our great northern land, the land of the *aurora borealis*, the land of the boreal forest and the Hudson Bay lowlands. The lands and waters are speaking to us. The lands and waters hold a secret as the place in which we are called to work out our salvation. Do we have the eyes to see, and the ears to hear the Word of God active in our land?

I invite the faithful of our northern Church, and indeed all men and women of good will, to begin a dialogue, a conversation that dreams of an integral ecology for northern Ontario. The future will bring us significant challenges. Let us dialogue with each other. Let us seek paths of unity and hope that will enliven our families, our communities, our lands, and our waters. Let us seek ways that will keep the land alive (For an indigenous witness to the life of the boreal lands and waters, see Tshaukuesh Elizabeth Penashue, *Nitinikiau Innusi: I Keep the Land Alive* [Winnipeg, University of Manitoba Press: 2019]).

May God, whose Word is continually active in all his creation, grant us the freedom and grace to live joyfully a resurrected world, and to ever seek “a new heaven and a new earth” (Revelation 21.1).

Original in English



We Are the Amazon: A Campaign to Defend Life and Territory

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The Bishops of the Amazonian territory gathered in Rome for three weeks in October 2019 for the Synod of the Amazon. This meeting concluded a synodal listening and dialogue process, which began through Pope Francis's promptings at his visit to the Amazon two years ago. The process involved consultations with hundreds of missionaries, laypeople, and the indigenous peoples of the Amazon to discern the Church's presence in the Amazon, given its history, the region's unique characteristics, and the inhabitants' present challenges.

The result of their synodal discernment is reflected in the final document of the Special Assembly for the Pan-Amazonian Region, entitled *The Amazon: New Paths for the Church and an Integral Ecology*. It calls for a redirection of ecclesial presence based on four forms of conversion: *pastoral conversion*, which looks to the horizon of a Church that goes forth serving and accompanying the Amazonian peoples; *cultural conversion*, which appeals to the recognition of the Amazonian peoples' cultural values and for intercultural dialogue; *ecological conversion*, which articulates the cry of the earth and the poor, seeking to promote an integral ecology;

synodal conversion, which invites rediscovering the way of being Church through opening a horizon of participation and communion with the peoples of the Pan-Amazonian region. The Pan-Amazonian Ecclesial Network (REPAM) summarised these four forms of conversion. Finally, it presented a single call to all networks of international Catholic organisations that accompany this process: a call to "Amazonize ourselves,"¹ that is, to build bridges between the people who inhabit the Amazon jungle and those who live in the "other jungle," that which is of cement and asphalt.

This call to build bridges reminds us that "everything is connected" (Pope Francis, 2015, § 16). Therefore, the planet's survival depends on understanding the interconnections and global links between human life and nature and on internalising the urgency of caring for and defending these relationships. Under this logic, the Amazon is a great biome shared by nine countries and an interconnected plurinational whole, fundamental for climate stability and preserving life on the planet.

¹ The original Spanish is "amazonizar-nos".

The Cry of the Land in the Amazon

We are accustomed to thinking of the Pan-Amazonian region as regards its natural wealth. Although it makes up barely 4% of the earth's surface, the Amazon River and its tributaries provide approximately a quarter of the planet's fresh water. It is also the largest tropical forest on earth and is home to about 10% of known plant and animal species, some of which are found only there (UNDP and ACTO, 2009). In the Synod's final document, however, the Synod Fathers refer to the Amazon as "a wounded and deformed beauty, a place of suffering and violence" (Synod of Bishops 2019, § 10).

Since colonisation, especially in the last seventy years, humanity has intervened in the biome, threatening its survival irreversibly. The demand for raw materials by global markets and the regional governments' commitment to extractivist development models exert increasing pressure on the life and land of the Pan-Amazonian region. For example, resource extraction—direct or indirect—is currently permitted in more than half of legally protected areas (PAs). These PAs, albeit with varying degrees of territorial protection, comprise 25% of the Amazon River basin meant to function as natural parks (SPA, 2021, Ch.16). Similarly, another 25% of the Amazon basin is covered by practically half of the 6,491 legally recognised Indigenous Territories (ITs). Lawfully excluded from land sale and purchase, these ITs, however, are now threatened by external pressure (Pulecio Yate, 2022). Pressure is from expanding extractive industries like energy mining and agri-business, urbanisation, and infrastructures for transportation and communications. In fact, in the last 35 years

alone, there has been a 656% increase in mining, a 130% increase in urban infrastructure and a 151% increase in agriculture and livestock (RAIGS, 2020). Such extractive expansion results in accelerated deforestation and poses a systemic risk to the Amazon biome.

The extractivist economy disregards the global relevance of Amazonian environmental services. Furthermore, it ignores the indigenous knowledge that has allowed the Amazonian peoples to live within and from the forest. The destruction of cultures, languages, and institutions of indigenous peoples, Afro-descendant communities and farmers is provoked by several processes. To name some examples: mass planting of monocultures (agroindustry and extensive cattle ranching), extraction of natural resources (fossil fuel, hydroelectricity, mining), construction of road, port and airport infrastructures to facilitate large-scale circulation of goods, large-scale logging of the forest, and increased human migration as a consequence of unemployment in rural areas (SPA, 2021, Chap. 24 and 27).

As of 2020, nine countries which comprise the Amazon have lost the following percentages of rainforest: Brazil (18%), Colombia (11.7%), Ecuador (10%), Bolivia and Peru (8%), Suriname and Venezuela (4%), French Guyana (3%), and Guyana (1%) (Costa, 2020). Indiscriminate logging and fires destroyed almost half of the territory in the last 25 years. Both phenomena are closely linked to an extractivist economic model that reduces the natural goods of the Amazon merely as resources for the creation of wealth and economic growth. In a conventional economy, for example, the "value" of a hectare of the Amazonian rainforest is only

seen when cut down, commercialised, and converted into “productive land” (be it a mining site, a field, or a pasture for extensive cattle ranching). Only by its destruction is the worth of the Amazon accounted for in the Gross Domestic Product in any of the nine countries that make up the region.

Pope Francis emphasises in his 2020 apostolic exhortation, *Querida Amazonia*, “when certain businesses, for a quick profit appropriate lands and end up privatising even potable water, or when local authorities give free access to timber companies, mining or oil projects, and other businesses that raze the forests and pollute the environment, economic relationships are unduly altered and become an instrument of death” (§ 14). And in his Letter for the event, “Economy of Francesco,” whose first gathering took place shortly after the Synod, the pontiff specifies the need to study and practice “a different kind of economy: one that brings life not death, one that is inclusive and not exclusive, humane and not dehumanising, one that cares for the environment and does not despoil it” (Pope Francis, 2020).

But what does this mean for those living in urban environments thousands of kilometres away from the Amazon? What does “amazonize ourselves” from this “other jungle” of cement and asphalt mean? And, even more difficult, how can it be done? We set out to answer this call from Alboan and Entreculturas, two international cooperation works of the Society of Jesus in Spain. The key to this has been listening to the Amazonian territory, on the organisations and [processes that we](#)

[support and accompany in the Amazon](#) (CIPCA, CIMI, Fe y Alegría, SAIPE, SJPAM), and reflecting on our reality. The result is the campaign, “*Somos Amazonía: Defendamos Nuestra Casa Común*”².

Caring for Life and Land as a Horizon

In *Querida Amazonia* (2020), Pope Francis warns that “the inescapable truth is that, as things stand, this way of treating the Amazon territory spells the end for so much life, for so much beauty, even though people would like to keep thinking that nothing is happening:

“Those who thought that the river was only a piece of rope,
a plaything, were mistaken.
The river is a thin vein on the face of
the earth...
The river is a cord enclosing animals
and trees.
If pulled too tight, the river could burst.
It could burst and spatter our faces
with water and blood”. (§ 47)

This poem by Juan Carlos Galeano, quoted by Pope Francis, illustrates the fragile reality of the Amazon. It connects us with the vision of integral ecology, which is the care of life and land taught by the indigenous peoples or guardians of the Amazon’s ancestral ways of life. The vision can also be reached through different spiritualities and schools of thought. This is how we have become familiar with ecofeminism, a diverse school of critical thinking that challenges the division between society and nature, questions gender relations in production and consumption systems and the

² This translates to “We are Amazonia: Let's Defend our Common Home.”

conventional economy's tendency to disregard some indispensable elements for the preservation of life. We refer, on the one hand, to the care (of the home, children, dependents) that has historically been linked to women and, on the other hand, to the environmental services provided by nature, without which life on the planet as we know it today would not be possible.

"Somos Amazonía: Defendamos Nuestra Casa Común" delves into this perspective through the voices and conversations of ten women from both sides of the Atlantic with different life experiences and professional profiles (activists, socio-pastoral workers, academics, indigenous people). Their testimonies have been captured in the audiovisual exhibition ["Defensoras de la Naturaleza,"](#) which shows their stories of commitment to the defence of life and the care of the Common Home. From these conversations, we published the report ["Somos Amazonía. Claves ecofeministas para la Defensa de la Amazonía,"](#) which gathers some ideas to rethink our relationship with nature through a global-local [glo-cal] perspective.

Incorporating a global citizenship perspective in these reflections underscores our responsibility to transform the extractivist economy from this "other jungle" where many raw materials are extracted from the Amazon and other places without considering human or environmental rights. As Pope Francis (2020) expresses in *Querida Amazonia*, "The cry of the Amazon region reaches everyone because the "conquest and exploitation of resources... has today reached the point of threatening the environment's hospitable aspect: the

environment as 'resource' risks threatening the environment as 'home'". The interest of a few powerful companies should not be considered more important than the good of the Amazon region and of humanity as a whole" (§ 48). In line with this call, in 2020, more than [230 Bishops signed a public statement](#) calling for binding regulatory frameworks to guarantee the obligation of companies to protect human rights and the environment.

Two years later, in February 2022, the European Commission took the first step in this direction by publishing a proposal for a Directive on Corporate Sustainability Due Diligence. For the first time, this standard will require companies to identify, assess, prevent, and mitigate potentially adverse effects of their businesses on human rights and the environment while establishing mechanisms for victims' access to justice. However, more than 220 civil society organisations denounced the existence of essential gaps in the proposal last May. For example, the definition of adverse impacts on human rights and the environment is somewhat limited (e.g., it does not include damages from oil spills such as the one that recently occurred in Peru). In addition, the participation of stakeholders in the due diligence process is minimal, and the proposal will leave 99% of European companies under no obligation, contrary to international guidelines.

For this reason, given the upcoming vote in the European Parliament later this year, Alboan and Entreculturas have launched a campaign on [visible.org](#) to collect signatures demanding Members of the European Parliament to introduce necessary amendments to strengthen the proposal. Unfortunately, these negotiations are likely

to drag on, and it will take several years for Member States to implement this legislation. But if we fail to act now, we risk losing a unique opportunity to achieve a law that does justice. Similarly, as human rights and the environment cannot wait, at the national level, we are also participating in the Platform for Responsible Business so that the Spanish government, in this legislative term, approves the “Made in Spain” corporate sustainability due diligence law.

This is how Alboan and Entreculturas respond to the invitation to “amazonizar-nos.” The road to transforming our organisations and committing our work to integral ecology is long and complicated. Still, we believe it is necessary to walk it by building critical citizenship that mobilises for a more just, equitable and sustainable world. Visit the website www.somos-amazonia.org and find out how you can join us to respond to this call.

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The Amazon is Burning: Why Do We Need to Listen to its Cry?

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Undeniably, some readers have read grim news about the escalating deforestation of the Amazon and climate scientists' calls against destroying this ecosystem so as not to cross planetary limits towards irreversible climate change. Likewise, readers possibly have heard the cry of the Amazon's indigenous peoples, violently dispossessed of their lands or murdered, as in the case of indigenous Brazilian activist Bruno Araújo and British journalist Dom Phillips— who join a long list of those killed in recent years. The destruction of the Amazon has multiple interrelated causes originating in the expansion of (1) soybean and corn— particularly transgenic— agribusiness and palm oil, (2) crops for illicit use such as coca, (3) extensive cattle ranching, (4) large-scale mining, gas and oil exploitation, (5) urbanization and colonization processes linked to the rise of poverty, and (6) infrastructure projects such as roads and hydroelectric plants, among others (RAISG, 2015). The figures are alarming¹, but sadly, one quickly gets used to them.

Why should we care about Amazon? Why do we need to listen to its cry? Most have never seen nor will likely visit Amazon. Most do not personally know anyone of its suffering people, nor its thousands of endangered species of flora and fauna.

I believe we need to not only listen but also respond, in solidarity, to the cry of the Amazon and the people who inhabit it. As human beings, this is an ethical duty to ourselves, the other living beings and ecosystems of the planet, and the next generation of humans, flora, and fauna. First, the ethical duty is based on defending inviolable life—the life of the people and other species that inhabit the Amazon and the Amazon's intrinsic value as an ecosystem. Second, the importance of its biocultural diversity as a source of food, medicine, water, and knowledge not only for the Amazon region but also for our planet. Lastly, it is based on the importance of the Amazon in the fight against climate change and global environmental catastrophe. Integral Ecology— proposed

¹ In Brazil alone, "the Instituto Nacional de Pesquisas Espaciales reported that during the first six months of this 2022, the Brazilian Amazon broke deforestation records with the loss of at least 3,987 kilometers of vegetation, that is, an area equivalent to five times the size of New York City" (Chávez Rincón, Melissa.

France 24, July 10, 2022. Available at: <https://www.france24.com/es/am%C3%A9rica-latina/20220710-deforestaci%C3%B3n-en-la-amazon%C3%ADa-brasile%C3%B1a-bate-r%C3%A9cords-en-el-primer-semestre-del-a%C3%B1o>

by Pope Francis in his encyclical *Laudato Si'*—shows us a path of understanding, reflection, and action to contribute to the protection of the Amazon and the territorial and environmental rights of the people who live there.

This paper is based on our vital relationship with forests and their biodiversity. The Amazon is my point of reference, but clearly, ethical duty extends to all forests and the peoples that inhabit them throughout the world.

The Biocultural Diversity of the Amazon and its Importance for Food and the Fight Against Climate Change

The Amazon, after the oceans, is the ecosystem that captures the most carbon and is home to the most incredible biodiversity in the world. The Amazon contains more than 390 billion trees and 10% of the world's biodiversity. The Amazon, which includes nine countries (Brazil, Bolivia, Peru, Colombia, Ecuador, Venezuela, Guyana, Suriname, and French Guiana), is home to 35 million people, including more than 2.6 million indigenous people. Colombia has 52 ethnic groups from 13 linguistic groups and ten isolated languages. Its unparalleled biological diversity includes, for example, in Colombia, 674 species of birds, 158 types of amphibians, 195 kinds of reptiles, 212 species of mammals, 753 types of fish and more than 6,300 different kinds of plants². In his encyclical *Laudato Si'*, Pope Francis (2015) emphasizes the importance of the Amazon as one of the "richly biodiverse lungs of our planet" (§ 38).

The Amazon is considered the world's largest and most biodiverse forest, an iconic place - like the North and South Poles or the Sahara Desert - often thought to be pristine and uninhabited. However, I would like to offer a different representation of Amazon. It is an ecosystem inhabited for millennia and whose current biodiversity is partly the result of the lifestyles, worldviews, and cultural practices of diverse human groups that have lived there for many generations or migrated there recently. In other words, in the Amazon, biodiversity is intimately related to human cultural variety; hence we refer to its biocultural diversity. Furthermore, the various types of human population centres in the Amazon are evidence of long-term settlement processes, ranging from territories inhabited by sparsely-populated indigenous peoples to cities such as Manaus, Brazil, with more than 2 million inhabitants.

In the encyclical *Laudato Si'* (2015), Pope Francis calls for protecting ecosystems such as the Amazon and its biodiversity because they have an intrinsic value, regardless of their usefulness to humans. Likewise, they have value as a common good, providing well-being, meeting the needs of the poorest, and sustaining worldviews and ways of life. This contrasts with a view of forests as exploitable "resources" or tradable goods whose value is determined by corporations' and global elites' financial profits from their exploitation or conservation (Francis, 2015, § 195).

² <https://tinyurl.com/WorldWide-Life-Fund>

The importance of the Amazon for the survival and ways of life of its inhabitants, primarily indigenous peoples and all of humanity, is invaluable. The indigenous peoples of the Amazon (like most ethnic peoples and farmers worldwide) combine hunting, gathering wild fruits, timber and medicinal plants, fishing, and agriculture as complementary subsistence strategies. For example, the Amazon is the place of origin and first domestication of an endless variety of edible plants like yucca and other tubers, fruits like arazá, açai and pineapple, and ají chilli and annatto. It is also the source of plants with powerfully hallucinogenic properties, such as yopo and ayahuasca, that indigenous communities use for ritual and medicinal purposes.

The indigenous communities of the Amazon have developed agricultural systems that, although having local and regional variations, are based on ecological cycles and vital functions of the forest³. These systems provide essential elements for moving towards more sustainable agricultural models. Their fundamental characteristics consist of a deep ecosystemic knowledge of climate cycles (rain, winds, etc.), rivers and soils, and the life cycles and interactions of cultivated plants with other plant and animal species in the forest.

Despite its rich biocultural diversity -- or perhaps because of it -- the Amazon is one of the places with the most significant socio-environmental conflict in the world⁴. According to the latest Global Witness

report (2021), two countries in the Amazon basin ranked among the top five countries with the highest number of killings of environmentalists in the world: Colombia in first place with 65 murders and Brazil in fourth place with 20 murders. In addition, there is no doubt that the Amazon has been host to resource extraction and violent dispossession fueled by boom cycles of raw materials such as rubber, quinoa, fine hardwood; oil and natural gas; gold, and copper. And more recently, extraction of rare earth metals coveted by the high-tech industry, such as coltan; the genetic diversity of flora and fauna (bioprospecting) for use in pharmaceutical and cosmetic products, among others; and transgenic soybeans and corn, palm oil, and coca. In this way, Amazon has been deeply linked - often in violent ways - with the world economy and globalization processes since at least the 19th century.

The alarming deforestation of the Amazon by these extractive activities has generated an invaluable loss of biodiversity and ecosystem functions, has impacted vital spaces for the well-being of local communities, and has damaged economic resources and increased Greenhouse Gas (GHG) emissions.

It is important to remember the urgency of action needed against climate change. According to the most recent UNEP report, we are approaching irreversible climate change and biodiversity collapse, and thus the global response is becoming increasingly urgent to reduce carbon dioxide emissions by 45 per cent by 2030

³ As an example, consult the research of Colombian anthropologist Nelsa De la Hoz (2019) on the "conuco" of the Piarao people of the Resguardo Unificado Selva de Matavén,

located in the department of Vichada in Colombia.

⁴ See *Environmental Justice Atlas*, 2015.

compared to 2010 levels and reach net-zero emissions by 2050 to achieve the 1.5°C Paris Agreement target while at the same time conserving and restoring biodiversity and minimizing pollution and waste (2021: 9).

After the oceans, the Amazon is the ecosystem that absorbs the most significant amount of carbon in the biomass of this immense tropical rainforest. Therefore, it is crucial to stop the deforestation and degradation of the Amazon in the fight against climate change to avoid the massive release of carbon dioxide captured in its biomass into the atmosphere. But, most problematic, recent studies suggest that the rapid deforestation of the Amazon may already be releasing more carbon than it stores⁵.

How can We Listen to the Cry of the Amazon?

In the encyclical *Laudato Si'*, Pope Francis (2015) alerts us to the environmental crisis resulting from our economic and social models. He calls us to build an integral ecology that reintegrates human beings in nature with a view to the common good. And inter- and transgenerational solidarity constituting a new paradigm of justice. The Pope writes:

We are faced not with two crises, one environmental and the other social, but rather with one complex crisis, both social and environmental. Strategies for a solution demand an integrated approach to combating poverty, restoring dignity to the excluded, and at the same time, protecting nature. (§ 139)

Based on *Laudato Si'*, I consider these four aspects of Integral Ecology fundamental for protecting and caring for the Amazon: **(i)** the common good that underlies sustainable development with intra- and intergenerational solidarity, 'social peace' and distributive justice (§ 157, § 159), **(ii)** the recognition of ecosystems and living beings, intrinsically and as common goods (§ 224), **(iii)** environmental injustice or the injustice "perpetrated under the guise of protecting the environment" (§ 170) violates the sovereignty of developing countries and ignores the "ecological debt" (§ 51) and the existence of "common [but] differentiated responsibilities" in the face of climate change (§ 170), and **(iv)** cultural ecology that emphasizes the importance of "the constant and active involvement of local people "*from within their proper culture*" in development and conservation projects (§ 144, emphasis in the original).

It is vital to highlight Pope Francis' (2015) criticism of multilateral initiatives based on payment for environmental services and carbon markets as a strategy for forest conservation and greenhouse gas reduction:

Buying and selling "carbon credits" can lead to a new form of speculation that would not help reduce the emission of polluting gases worldwide. This system seems to provide a quick and easy solution under the guise of a certain commitment to the environment, but in no way does it allow for the radical change which present circumstances require. Instead, it may become a ploy

⁵ Welch, C. 2021. *National Geographic*. Available at: <https://www.nationalgeographic.es/medio-ambiente/2021/03/la-selva-amazonica->

<parece-estar-contribuyendo-al-cambio-climatico>

that permits maintaining the excessive consumption of some countries and sectors. (§ 171)

Pope Francis (2015) also refers to global inequities in the fight against climate change whereby the "foreign debt of poor countries has become a way of controlling them, yet this is not the case where ecological debt is concerned" (§ 52).

The countries of the Amazon basin have not contributed significantly to the emission of greenhouse gases, given their nascent industrialization compared with the countries of North America or Europe or with those experiencing rapid development in recent decades, such as Korea, Japan, or China. Yet, the deforestation of the Amazon and other tropical ecosystems -- such as the tropical rainforest of the Colombian-Ecuadorian Pacific coast, the tropical savannas of the

Brazilian Cerrado or the Gran Chaco of Bolivia and Brazil -- is the primary source of carbon emissions in these countries.

Robust financial support from affluent countries is needed to stop deforestation in the Amazon, as well as the perseverance of indigenous peoples and other peoples historically discriminated against in each of their territories. We cannot protect the Amazon without guaranteeing the territorial rights of indigenous peoples in the face of large-scale extractive activities already inscribed in a long history of (neo) colonial domination. We must also recognize that the Amazon rainforest and the non-human living beings inhabiting it are victims of socio-environmental conflicts derived from historical and contemporary extractive activities. Therefore, we also must guarantee their rights to fulfil vital cycles according to their respective ways of life.

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The Amazon: The Heart of Humanity

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The Amazon is vital to the world for its tremendous and complex socio-diversity. It is the largest tropical forest on the planet, concentrating 1/3 of its biodiversity and covering nine countries in South America. One of every three known species is found in the Amazon. In addition, this region has 20% of the planet's fresh water and many mineral resources. Due to all this natural wealth, the Amazon is a strategic, highly coveted, and disputed region. And yet, 25% of the Pan-Amazonian region has already been deforested¹.

There are 400 indigenous groups living in the Pan-Amazonian region. Its three million people speak more than 250 languages belonging to 50 major language families. In addition to these registered or contacted people, there are indications that more than 140 isolated people have no contact with society.

Despite not being recognized and valued, indigenous peoples and traditional communities, with their worldviews and cultures, have been guardians of the forest for millennia. Satellite images prove that

the most preserved areas of the Amazon are indigenous lands and protected units inhabited by traditional communities.

Indigenous peoples care for the Amazon as a proper "vital organ" of the planet and are sources of ancient wisdom, care and socio-environmental justice for humanity and the Earth.

Currently, numerous projects and economic endeavours are underway in the Amazon: mining, land grabbing, hydroelectric projects and other activities that compromise the biodiversity and the survival of future generations.

The Amazon, referred to by the media and international advocacy efforts as the "lungs of the world," has had environmental and social problems that generated global repercussions since the 1980s. The expansion of agribusiness, especially soybean monoculture, is the most recent threat to the Amazon. Between 1985 and 2020, an estimated 44.5 million hectares of the Amazon were deforested². Cattle ranching has become the main culprit and principal cause of deforestation. There are more than 64 million heads of cattle, and

¹<https://www.caf.com/es/conocimiento/visiones/2019/09/la-riqueza-natural-de-la->

<amazonia-como-base-del-desarrollo-sostenible-regional/>

² Ibid.

the deforested area currently exceeds 70 million hectares.

The other major threat is mining exploration in the Amazon region. For example, mining in the Yanomami indigenous land results in violence, environmental destruction, and disease. In Brazil's most significant indigenous territory, illegal mining increased by 46% in the region last year, the most extensive devastation since the delineation of the territory's boundary almost 30 years ago. In 2021, environmental degradation reached an area of 3,272 hectares of land, compared to 2,234 hectares in 2020 -- more than 1,038 hectares damaged in a year.

In addition, the Brazilian government is pushing for an unconstitutional legal framework that allows for the exploitation of minerals on indigenous land through bill 191/2020. Moreover, the government took advantage of the covid-19 pandemic "*para pasar el rebaño, y otorgó*" or "to let pass the flock pass through." While everyone was nervous about the pandemic, the government quietly granted numerous mining concessions to Canadian companies such as Belo Sun, Eldorado Gold, Amarillo Gold, Largo Recursos and Yamana Gold.

For example, in January this year, Cabral Gold, a Canadian mining company, obtained the right, through political manoeuvres, to extract up to 100 thousand tons of gold annually in a forest area in southeastern Pará - even before having acquired the license and the standard mining concession. Moreover, the company has excavated without authorization since 2017; it is Cabra Gold's third-largest gold mine in Brazil.

All these endanger the life of the Amazon. Therefore, a global effort is needed to protect the Amazon and stop this development model that kills Mother Earth and all her people.

For 20 years, I have been working directly with indigenous peoples, defending life, land, and rights in the Rondônia State of the Brazilian Amazon, as a missionary of the Indigenous Missionary Council, an institution of the National Conference of Bishops of Brazil (CNBB). The state of Rondônia is devastated and deforested. Economic groups and organized crime have turned the region into land for mining, agri-business, and other agricultural activities that leave a trail of desertification. However, the Amazon region cannot survive without the rainforest intact.

Despite years of exploiting the Amazon, the ongoing persecution, slavery, wars, various diseases and the imposition of a system guided by values utterly different from those practised by the indigenous communities, the indigenous peoples remain undefeated. We continue to struggle to defend Mother Earth.

Let me share with you briefly my journey, which connects with that of many other social actors in grassroots work with indigenous peoples. Through missionary life with the Karipuna people, I struggle for and work in defence of the Karipuna Indigenous Territory, which has been restricted, homologated, and registered since 1998. And, even so, this territory suffers numerous invasions. The defence of the Karipuna territory constitutes the defence of the rights guaranteed in the Federal Constitution of Brazil. The Karipuna people, 30 years ago, suffered

near extermination: only eight people remained, five adults and three children. Today, the people live with the looming threat of genocide due to the illegal action of economic and political groups that want to appropriate their lands. There are even applications for mineral exploitation by national companies, which are waiting for a legal framework to start extracting and thus endangering the physical, cultural, and territorial integrity of the Karipuna people.

The community cannot sleep peacefully. Gunshots and the noise of tractors deprive

the people of peace. Their leaders, as well as their supporters, receive death threats. Denouncements have already been reported in national and international forums, seeking allies in defence of the territory of the Karipuna people and indigenous peoples.

The Amazon is beautiful, rich, and diverse but has a complex and fragile system. For her to live, it is necessary to respect its forests, fauna, waters, and the native and Amazonian peoples who have lived in harmony with the environment for millennia.

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The 'Space-Time' As a Theological Place

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Introduction: A Pioneering and Thought-Provoking Initiative

A few years ago, Pope Francis proposed a pioneering initiative that has given food for thought: to convene a universal Synod to address issues arising from a specific territory, the Pan-Amazonian biome. In addition to organising the Synod, two organisations with territorial criteria were created: REPAM (Pan-Amazonian Ecclesial Network) and CEAMA (Ecclesial Conference of the Amazon Region). Furthermore, Pope Francis highlighted in *Laudato Si'*, the relevance of territories, especially regarding the socio-environmental crisis. Such awareness appears through the encyclical's interweaving threads: the conviction that everything is interconnected and the call to articulate the cry of both the poor and the earth.

Our objective is to offer a theological proposal in keeping with the relevance and timeliness of the papal initiative: "space-time as a theological place." To do so, we will proceed as follows: first, we will draw attention to the emergence of a new era, expressed in the awareness that space is the result of the composition of all the expressions of life on the planet. Then we will discern the challenges these "signs of

space-time" pose to faith and theological efforts.

1. Space-Time: Organisms make an Environment

We are in a new epochal configuration. In the past, we considered space a mere stage for historical events played out by human beings. Today, however, we are increasingly convinced that space is the child of time since organisms do not simply adapt to the environment but make it. Therefore, we must express ourselves in terms of *Geo-history*.

1.1. Would space be a mere stage for historical events?

From its beginnings, so-called "modernity" has been imposed through two typically colonialist processes: the violent exploitation of the goods and services of the earth and the creation of individual-subjects separated from the earth. The relationship between the latter and the former has been based on exteriority, superiority, and instrumentality. Moreover, the modern-colonial invention of subjectivity as *cogito* has provoked a series of fractures in the natural, social, and existential fabric. Violently separated from Mother Earth, we no longer consider ourselves "sons and daughters of the Earth." Reduced to

individuals, we feel disconnected from and opposed to ourselves and others that make up the social and cosmic fabric. And, finally, we are violently cut off by an existential division into two (*res*): a physical substance and a thinking substance. As a result, we have been forced to suffer some form of existential, social, and cosmic schizophrenia.

Cartesian thought came as a perfect fit for the interests of the emerging society concerned with extracting goods, seen as mere resources from nature, and transforming them through the enslavement of human bodies into mere commodities for businesses of the emerging colonial mercantile capitalism. Note that it was not just a question of considering nature as objective and merely extensive. Human beings of other “races,” considered subhuman or non-human, were also treated as mere bodies to be enslaved and subjected to strenuous labour. Modernity and colonialism, characterised primarily by the enslavement of humans of other races and the extraction of goods and services from colonised territories -- and not only by the emancipation and autonomy of reason -- in effect, rendered us incapable of experiencing “belonging,” “respect,” and “care” for territories and their natural goods and services.

Modernity and colonialism, in this sense, have been operating an unwarranted reduction of complex reality into two well-defined sections: one is objective and inert, and the other is subjective, conscious, free, and endowed with a moral sense. The section considered inert was reduced to a mere stage of the historical narrative whose only protagonist would be the human being. The division between the two

sections is based on a “scientific vision of the world.” Such a vision is responsible for denying the world its intrinsic historicity and narrativity. It renders unfeasible all human experience of “being with the world.” The stage is considered “outside” and, therefore, “outside” the narrative. This would be the presupposition of those insisting on the notion of “environment” as an external space in which the human being is situated and acts, an autonomous subject detached from its inert setting.

This contrived operation would be characterised as an invention for all intents and purposes, given that: on the one hand, a section of the world declared objective and inert *becomes disheartened* and, once deprived of any activity, is reduced to a mere stage. But, on the other hand, the contrasting and superior section, declared subjective and endowed with admirable capacities for action: freedom, conscience, reflection, moral sense, etc., is over-activated (Latour, 2020a, 116; 142ff).

1.2. *Space is the child of time*

Today, we find ourselves amid a new epochal era. In recent decades, we have been affected by a kind of revolution because what we considered a mere “backdrop” had assumed the foreground of our historical narrative. And the reason for this radical turn seems to be what Bruno Latour has so forcefully stated: “Organisms make their environment; they do not adapt to it” (Latour, 2020b, 162-167).

“There is nothing inert, nothing benevolent, nothing external in it. If climate and life evolved together, space is not a frame, not even a context: *space is the child of time*. Just the opposite of what Galileo had begun to implement: to enlarge the space for

each thing in order to put each actor inside, *partes extra partes*. For Lovelock, this space no longer has any kind of meaning: the space in which we live, that of the critical zone, is exactly the same space in which we conspire; it extends as far as we do; we last as long as those who make us breathe" (Latour, 2020b, 174).

If Latour is correct when he says that "space is not a frame, not even a context: *space is the child of time*," then, strictly speaking, we should get used to speaking not only of History but of Geo-History. But, moreover, if we agree with what Latour has written, "the space in which we live is exactly the same space in which we conspire," then we must admit that space "extends as far as we do; we last as long as we can breathe." Therefore, as capable of reacting to our actions, the Earth, in addition to motion, would have a behaviour. Symbolic, by the way, is the expression "And yet the Earth moves," formulated by Michel Serres in a clear allusion to what Galileo Galilei said in the context of his public retraction: *Eppur si muove!* (Serres, 1990).

In a recent interview granted to Fr. Spadaro and published by the Italian newspaper *La Repubblica*, Latour uses terms such as construction, production, invention, and fabric to refer to the relationship between the living organism, the Earth, and the living beings that inhabit it. He writes:

When it is explained that the living are those who have constructed the conditions in which they find themselves, this brings about a change. The Earth is not alive in the New Age sense or in the simplistic sense of a single organism, but is constructed,

produced, invented, woven by the living. It is not a simple framework within which they move. When I look at the sky above me, its atmosphere, its composition, the distribution of gases, all this is the result of the action of living beings. A passage opens in which spiritual realities are rich in meaning for our earthly condition. The materialism of the previous centuries - one notes with pain - is actually ungrounded in reality (Latour, 2022).

In this sense, we would say that there is structural interdependence among all expressions of life on the Planet: humans, other living beings and entities that populate the cosmos. In this sense, we would like to highlight the clarity of the "Earth Charter," which, by exposing the neologism "community of life," proposes relationships of belonging, interaction, and care for all expressions of life that inhabit planet Earth. This implies favouring relationships and fluidity of motion, not well-defined borders, in a continuous arrangement process among organisms, species and groups.

2. Signs of Space-Time: Challenges to Faith and Theology

This new era presents numerous challenges to faith and, consequently, to theologies. It is impossible to deal with them all; thus, we prioritise: listening to the "cry of the poor" and the "groans of the earth" in their mutual implication.

Today's theologies are called upon to take up the challenges arising from the "ecological crisis," weaving an intricate web through the articulation of two mutual and complementary bonds: the evangelical option for the poor and the calls of the "Gospel of Creation".

Because of its intrinsic complexity, our reality requires us to choose a perspective from which to understand it, situating ourselves in its web of questions and renouncing a pretentious claim of totality. In most cases, we can try out contributions that will always be partial and fragmented. Nothing more than simple insights emerge from different partial perspectives. This limitation also becomes a privileged opportunity to understand reality in its intricacy.

Moreover, a specific partiality inherent to Christian theological work derives from the awareness of the partiality of Jesus. He was sent to announce the Good News to the poor and excluded. The assumption of this evangelical partiality will allow us to see certain things that can only be seen from the perspective of the poor. But, more importantly, it will lead us to correct our thinking and apprehend significant problems that afflict most of our population. The poor, unfortunately, continue to be relegated to the margins of our economic, political, social, and cultural relations. And the worst thing, perhaps, is to resort to shady and fancy proceedings to justify our indifference to their demands for a better life.

In the same way, in the face of the gravity of the present situation, theologies are called to recover their intrinsic eschatological dimension, for they carry within themselves a radical reserve concerning the present time. The eschatological dimension restores to Christian theologies a peculiar dynamism. It recreates the vital relationship for theologies: with life, culture, society, and the whole cosmos in its complexity. Therefore, theologies can awaken dormant dreams by reclaiming their most genuine

roots, making utopias flourish. This way, they can more easily unmask ideologies, false securities, idolatries, and stereotypes. Only in such a case will theologies be able to fulfil one of their primary tasks: to open paths to the future, forcing the emergence of what is not yet.

However, this utopia embodied by theologies should not be confused with a kind of blind, illusory, naive hope. It has nothing to do with shockingly alienating and numbing doctrines. On the contrary, Christian hope is anchored in the paschal mystery of Christ. Thus understood, it recovers the “dangerous memory of Jesus” (J.B. Metz), revealing its intrinsically subversive character concerning every established order. It is, therefore, a hope against all hope, as it is, in the final analysis, a hope that rises from the darkest depths of suffering and death assumed as a consequence of the commitment to justice and peace. In this sense, Christian hope radicalises the notion of the biblical memorial since it destabilises the present, questions the canons of hegemonic evidence and linear progress, and defends the causes of the vanquished, whose hope has been frustrated by the holders of established power.

The gravity and urgency of the issues related to the discourse on life on the planet require that any responsible theological discourse, which does not allow itself to be swallowed up by indifference and cynicism, be rooted in the condition of the poor and from a hopeful and utopian perspective. Hence the need to articulate the “groans of the earth” with the “cry of the poor” (Boff, 2015) to give them new meaning in the bosom of Christian utopia and eschatology. A discourse on the protection of life on the Planet that does not

incorporate the issues of poverty and hunger, social injustice, and the contradictions of financial capitalism commits the sins of naivety and connivance. Likewise, a discourse on life on the Planet that does not consider the question of its ultimate destiny and its inherent meaning will end up succumbing to tragic pessimism. The more the discourse on life on the Planet descends into the suffering of the poor and the victims, the more it will become sensitive to the dimensions of hope and utopia. The more it allows itself to be penetrated by eschatological hope, the more it will be able to raise awareness of the vital demands of poor people and other living beings who agonise on the Planet.

Conclusion: Welcoming the Signs of Space-Time as A Divine Interpellation

We want to emphasise the theological opinion explicated in our argument: the appropriateness of proposing “signs of

space-time” as a condition for recognising space-time as a theological place. The awareness of being in a new epochal era has given us food for thought: the environment is not a mere stage of our historical plot but, on the contrary, constitutes the space-time of a vital conspiracy among all expressions of life on the Planet (humans, other living beings and entities that populate the cosmos). Therefore, recognising “space-time” as a theological place implies inquiry, scrutinising, and discerning the signs of the Divine Presence between subtle wanderings. All this would correspond to listening to the cry of the poor and the groans of the earth. Therefore, this implies recognising that expressions of the planet's life – by humans, living beings and entities populating the cosmos – constitute the environment where we collaborate and are called to welcome the Creator's benevolence and generously respond to His designs.

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Saving the Mangrove Forests of Siruma, Camarines Sur – A Story of Recovering and Rebuilding Human-Nature Relationship

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*N*ature cannot be regarded as something separate from ourselves or as a mere setting in which we live. We are part of nature, included in it and thus in constant interaction with it. [...] It is essential to seek comprehensive solutions which consider the interactions within natural systems themselves and with social systems. [...] Strategies for a solution demand an integrated approach to combating poverty, restoring dignity to the excluded, and at the same time protecting nature (LS § 139).

Introduction

The World Bank considers the Philippines one of the world's most disaster-prone countries. In recent decades, damaging extreme events such as heavy rainfall and tropical cyclone activity have increased significantly.¹ Last November 8, 2020, typhoon Ulysses (internationally named Vamco) ravaged the National Capital Region, Ilocos, Cagayan Valley, Central Luzon, Calabarzon, Mimaropa. Bicol and Cordillera administrative regions were the worst impacted, adversely affecting the lives and livelihood of those who live in coastal and low-lying areas.

Siruma is one of the municipalities in the Province of Camarines Sur in the Bicol Region, Philippines, that bore the brunt of

the typhoon. Interestingly, the areas where the local communities reforested their mangrove forests were spared. Locals pointed out that had it not been for the mangrove cover, the damage to their livelihood would have been worse.

Used and Abused – The Story of Mangrove-Human Relationship

Years of rampant mangrove destruction increased the exposure of Siruma's coastal communities to the harmful impacts of climate change, particularly the strong typhoons that pass through the Bicol Region every year. Consequently, typhoons aggravate poverty among municipal fishers as they mainly bear the brunt of extreme weather conditions. The more their situation worsens, the more

¹ The World Bank. Climate Risk Profile: Philippines. 2021, 2. Taken from https://climateknowledgeportal.worldbank.org/sites/default/files/2021-08/15852-WB_Philippines%20Country%20Profile-WEB.pdf

[rg/sites/default/files/2021-08/15852-WB_Philippines%20Country%20Profile-WEB.pdf](https://climateknowledgeportal.worldbank.org/sites/default/files/2021-08/15852-WB_Philippines%20Country%20Profile-WEB.pdf)

they turn to destructive ways to extract what mangrove forests have to offer. After all, these are readily available for use, and the mangrove forest seems to regenerate quickly. Cutting mangrove trees for charcoal and dredging soil in the mangrove areas had become too ordinary and too familiar a site to the coastal dwellers. Too familiar that it has become too easy to overlook its importance to their daily lives. In a sense, the marginalization of the mangroves also reflects the marginalization of the municipal fishers.

Renewing Human-Nature Interactions: Mangrove Management in Siruma, Camarines Sur

Institute of Social Order (ISO) in Siruma started implementing a program to organize and capacitate fishers' organizations in select coastal *barangays* in the municipality in 2008. They tried to engage their local government in implementing community-based coastal resources management through this program. **The ISO operates this program on the assumption that once the municipal fishers are capacitated to conserve, protect and sustain their natural resource bases, they will become the rightful managers as primary resource users.**

The municipality's local fishers have long depended on their local resources for survival and sustenance. ISO assumes that they are aware of their importance and how their lives will be affected if their resource bases' integrity is compromised. To some extent, the local fishers

acknowledge it. They remember the traditional practices that preserved the integrity of their mangrove areas. They cut only specific trees or part of trees for use in building their houses and constructing fences and used particular types of fishing gear and nets that allowed juvenile fishes to escape and swim away.

Studies done by the ISO nonetheless yielded that the awareness of the local fishers of the condition of their mangrove resources is not that high. Perhaps, because they lived in the mangrove forests, co-existed with the trees and animals for a long time, and had known these to be a reliable source of provisions, they did not notice that these were no longer in good condition. Besides, they were so preoccupied with finding sources of income to put food on their tables, send their children to school, pay for their loans, and meet the daily expenses they overlooked the fundamentals. ISO, too overlooked this aspect since it focused on helping them find ways to improve their economic and social well-being.

One day, while engaging and interacting with one another during a training program on implementation, we both realized that the fish stocks and marine species on which they depend for a living are slowly decreasing in number. And while we attributed this to destructive fishing activities and intense competition from commercial fishers intruding on their municipal waters², there was also the realization that the decrease in their fish catch was also because the mangroves, where the fishes spawn, are already

² The 1997 fishery Code of the Philippines (RA 8550) identified the municipal waters as preferential fishing grounds of the small-scale

and artisanal fishers, otherwise known as municipal fishers.

destroyed. Moreover, the number of molluscs and shells that they used to gather when they could not go out to sea has gotten fewer. Additionally, they had also become vulnerable to flooding and storm surges.

Perhaps because the women in the communities were the ones who forage in the mangrove areas for shells and molluscs to augment food in their homes and for medicine when somebody was sick, they were the first to notice that the mangroves were no longer productive. Moreover, when a typhoon hits, women are the ones to ensure the safety of their children and elderly while the men secure their boats. Women were the first to recognize that the trees in the mangrove forests are already sparse, if not depleted. The participatory research and mangrove awareness sessions that the ISO conducted with them brought these to the surface. To sensitize them to what is happening in their environment, the ISO engaged them in mangrove inventory and discussions of their mangrove utilization patterns. Slowly, they began to realize the value of the mangrove forests in their lives³.

At a very young age, I was already aware that the mangrove areas serve as habitats for fish. I knew where they lay their eggs... not only fish but also crabs, prawns and shellfish
– N (name withheld), a female member of a fishers organization 1 in Siruma

They also began realizing how human activities destroy their mangrove areas.

Earlier Siruma had lush mangrove forests, but these are almost gone because mangrove trees were cut to give way to fishponds. Our fishing grounds were the first ones that got affected. With the mangroves gone, fishes have nowhere to lay their eggs. The leaf litter, which serves as food for marine organisms, likewise disappeared. – J (name withheld), a female member of a fishers' organization 2 in Siruma

Many cut mangrove trees as fishponds proliferated (in the community). They also used these for their houses – M (name withheld), a female member of fishers organization 3 in Siruma

The women slowly began to realize the need to participate in efforts to address the situation and, as such, were the ones who participated first in mangrove reforestation efforts. The women of Siruma have been responsible for reforesting more than a hundred hectares of their mangrove areas. They took part in gathering mangrove propagules and nurturing them to grow in nurseries, some of which are right in their backyards.

In the first year of starting the nursery, it was a dumping ground. Trash was everywhere. The first step was to fence the place, and then we bagged the seedlings until we only needed to water the seedlings and do maintenance. Then we were able to outplant these in the reforestation areas. – M (name withheld)

Some took it even further by experimenting with different ways to grow species that are difficult to propagate, even

³ Details of the story of these women can be found in Institute of Social Order and Forest Foundation Philippines. *Bakawan ng Buhay: Mga Kuwentong Bakawan ng Siruma*. Taken

from <https://www.youtube.com/watch?v=tT2yufL-Iq4> (InstiSocialOrder Productions)

for those with the training and experience. According to these women, mangrove reforestation is complex and challenging. However, the women also shared that they feel fulfilled seeing the seedlings they planted thriving. Engaging in mangrove reforestation enabled these women to find their connection with nature, their source of life and livelihood.

Their connection with nature is not the only one they have recovered. In the process, these women were also able to build and strengthen their relationships with one another. To find greater fulfilment in their work, they organized themselves. They took part in other tasks like patrolling their mangrove areas against those who illegally cut mangrove trees and dredging the mangrove areas to transform them into fishponds. They also engage in efforts to dialogue with the latter to urge them to join their organizations and explore non-destructive ways of fish and crab culture. They pursue their roles as managers of their local resources together. They say they are doing this to ensure their sons and daughters can still benefit from the abundance their mangrove areas offer. And more importantly, they are doing this for their communities and municipality.

Affirming Laudato Si'

The experience of the mangrove forests of Siruma and the local women fishers in the area has shown us that the destruction of the mangrove forests is somehow related to poverty. When people are poor and preoccupied with looking for ways to survive, people tend to see nature as a means to an end. It is easy to ignore and, at the extreme, push nature to its limits. When people are marginalized, they likewise marginalize nature itself. As

nature is neglected and abused, its capacity to provide for people's needs is compromised, creating a cycle of poverty and environmental destruction. In order to stop this cycle, the human-nature relationship needs to be rebuilt and renewed. This is what happened in Siruma.

While rebuilding the human-nature relationship in the municipality is still a work in progress, there are some indications that the efforts of the local fisherwomen have somehow slowed down the cycle of poverty and environmental destruction a bit. When typhoon Vamco passed through the Philippines in 2020, the municipality of Siruma had zero casualties in terms of human life. While some of the coastal communities of the municipality sustained damage, the areas where these women have rehabilitated their mangrove areas were not heavily affected. Locals claimed that the mortality rate of the mangrove seedlings the locals planted was minimal, and the physical damage in their communities was relatively minimal. If at all, the soil in these areas has stabilized.

More importantly, the locals in the municipality seemed to have developed deep care for their neighbours. After the typhoon had passed and the ISO embarked on an effort to distribute relief goods to those severely affected, members of the fishers' organizations that were part of the program chose to prioritize those most affected, although they, too needed support. Recovering a relationship with nature for the locals of Siruma translated into renewing their commitment to their neighbours and the next generation.

Human beings, while capable of the worst, are also capable of rising above themselves, choosing again what is good, and making a

new start, despite their mental and social conditioning” – (LS § 205).

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Climate Crisis and Alternative Solutions: Perspective from Indigenous Peoples

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Introduction:

The post-apocalyptic movie *'The Mad Max: Fury Road'* is a glimpse of the post-apocalyptic world where *The keeper of seeds* carries the seeds can no longer grow in toxic soil. The last seeds in her hand that she hopes she could grow on soil someday are a symbol of despair and hope that humanity is facing in the form of escalating ecological crisis. This apocalyptic symbol is becoming accurate with the advent of multiple ecological crises. These human-caused (anthropogenic) crises have relentlessly worsened to the point of 'tipping points' beyond which humans will lose the ability to get back or preserve a stable and healthy ecosystem. Climate crisis is aggravated by the inability of modern institutions and apparatus (nation-states, international organisations, science, technology, or benevolent capitalism) to bring about substantial and timely solutions to the most urgent crisis of the 21st century. While the scientific community has compiled unequivocal evidence on how human activities disrupt the climate system, this has not been enough to mobilise global action. The climate crisis has become yet more complex as it is intertwined with many

other factors and triggers multiple crises, such as poverty, inequality, etc.

The climate crisis and its near and far implications suggest an urgency to make a world livable for all. *Firstly*, to look for solutions to the crisis in ways that not only resolve the climate crisis but also make a radical departure from the systems that caused the climate crisis in the first place and are responsible for the relentless escalation of the crisis. *Secondly*, as climate change and its subtle and stark effects are already at play, there needs to be special attention to the poor, who have become yet more vulnerable. That includes the economic poor who have the least incentives to bear the consequences of the crisis, i.e. those living near the seashore, fragile ecological atmosphere, and those most dependent on ecology and thus affected by environmental changes, such as Indigenous peoples. The policy discourse has to be reversed to emanate from the concerns of those at the bottom. *Thirdly*, we must look for alternative economic and ecological systems to save us from environmental catastrophes. In search of solutions, we need to pay heed to existing systems (of knowledge and practices) that have a track record of ecological

sustainability, such as Indigenous people's ecological knowledge and practices.

Climate Crisis: An Analysis

The trajectory of our journey to the 'Ecological tipping point' travels through the trajectory of the 'Anthropocene,' i.e. human domination. Consequently, irreversible and abrupt environmental change or the gradual destruction of the "planetary life-support system" is critical to human survival. Beyond much popular term, *global warming*, climate change implies and is manifested in a plethora of crises such as biodiversity loss, nutrition depletion, sea level rise, fossil exhaustion, atmospheric temperature, more extreme and frequent weather disruptions, ocean acidification, stratospheric ozone depletion, interference with global phosphorus and nitrogen cycles, biodiversity loss, resource depletion, global freshwater exhaustion, land-system change, aerosol loading, and chemical pollution, etc. Like the thousands of species that sit on an *Extinction Death Row*, or the melting glaciers, some changes are irreversible, irreplaceable, and incurable. These changes, termed thresholds, planetary boundaries, extinctions, and limits, all imply something permanent that, once crossed, cannot be easily reversed if ever or where radical change is required.

The perpetual escalation of ecological crisis is due to two overlapping factors, i.e. the dominant developmental paradigm of infinite and relentless growth, which required endless exploitation of finite earth, and the absence of a corrective mechanism for the ills the present society has created. The over-exploitation of earth resources, triggered by the economic system called 'capitalism', rested solely on

continued discoveries of spaces of profits and resources, particularly of cheap resources, peoples, and territories. The development paradigm based on 'greed rather than actual needs' replicated in technological developments was apt to serve the purpose of profit rather than a good life for all. That is the only reason that despite incredible scientific and technical progress, humanity cannot solve society's fundamental problems like climate crisis, poverty, pandemic, disease, etc. Instead, the capitals make the disasters another arena of profit, i.e., *disaster capitalism*, as Dr Vandana Shiva, an environmental activist in India, rightly pointed out. This disaster capitalism, which tries to refashion itself with new avatars like 'newer technologies' or 'tech miracles' to fight climate change, is a hoax. It became evident during the Corona pandemic that when humanity fell to risk, different vaccine-producing companies competed to create the best vaccine instead of collaborating on research and production to save humanity. In such cases, nation-states remain the focus of loyalty and are, in the absence of a central world government, the only agents possessing sufficient capability and legitimacy to orchestrate the regulatory action necessary to sustain the global atmospheric *commons*. Green thinkers and radical ecologists have identified the state as part of the global environmental problems.

Nation-states could have potentially been legitimate and powerful institutions to facilitate environmentally sustainable policies. However, it fails to protect 'global atmospheric commons' as it gives primacy to 'national interest' (which prefers development, more emission, and more exploitation of resources and nature) over collective responsibility that costs national

budgets. The result of this is the repeated failure of the global climate regime and the ineffectiveness of international organisations and treaties. The treaties are easy to agree on, yet they have almost no impact on the emissions that cause global warming. Two overlapping developments in this regard are significant to note. First, when we needed truly international cooperation to solve the all-pervasive climate crisis, the nations were drifting apart from each other and succumbing to their national self-interests. The poor and the poorer countries (the ones least responsible for the crisis) will be particularly victims of the failure to tackle climate change at the international and national levels. Secondly, the poor in every nation, the most vulnerable to the climate crisis, are further made vulnerable by the changing nature of the state i.e. from a welfare state to a capitalistic state, where in the latter, the safety nets for the vulnerable are relegated to lower priority, making the poor further vulnerable. In contrast, in the latter, the safety nets for the vulnerable are relegated to the lower priority.

Peace, Justice and Reconciliation

The failure to solve the climate crisis is a matter of justice since it affects poor people, poor communities and developing nations. Although they are the least responsible for causing the ecological problem, they are subjected to the tragic consequences of the climate crisis. People and communities already burdened by poverty and oppression often suffer the harshest consequences while having the least ability to cope with climate change and its implications. Their struggle to earn a living, feed their families, and create stable homes becomes more complex daily as the climate crisis continues. These 'poor'

become increasingly vulnerable due to the failure of institutions like nation-states and the erosion of welfare mechanisms. Although we will all die one day, the poor are condemned to die early by the system.

Indigenous people, for instance, are particularly affected by the climate crisis as they are intimately connected with the ecosystems around them. The disruptive climatic changes jeopardise their ability to meet the basic needs of food, shelter, and cultural survival. It happens, although in most cases, they are least responsible for the crisis and instead are instrumental in preserving and sometimes enhancing ecosystems around them. Indigenous peoples also have the minimum coping mechanism to these disruptive changes due to inaccessibility to facilities and incentives. These disproportionate challenges of the climate crisis on indigenous peoples have to be relooked for better protection of their rights and saving the earth.

On the contrary, the indigenous peoples have been historically exploited and lost their homes to colonial powers, although they had big capitals for using natural resources and cheap labour. Their knowledge and contribution to the ecosystem have been neglected. They are often projected as irrational and backward; even today, their voices are not heard in climate negotiations. Their knowledge and practices are projected as traditional and outdated. Yet, most of the data shows that the last reserves of forests, ecosystems, biodiversity and successful governance of 'common' ecologies lie with the Indigenous people. It implies that the question of justice, peace, and reconciliation is the imagination of climate policies and advocacies. The perspective

from below and that of the poor is imperative to understand the climate crisis, making them focal in imagining climate solutions.

Restructuring the Economy and Developmental Paradigm

A few imperatives must be followed to realise a sustainable and healthy climate that will serve the good of all. First, in our search for an alternative to the growth paradigm, we must acknowledge that there is a limit to resources that can be exploited and redefine the paradigm of growth and well-being. It is essential to realise that the present global economic and development model (market or capitalist economy) has failed economically and created an impossible ecological crisis rate. The competitive market economy at the international and local levels creates enormous wealth for a few, oceans of poverty for millions and mountains of waste and ecological disasters for the planet. Therefore, the alternative economic structure should be based on solidarity rather than competition and needs rather than limitless greed. *Degrowth*, redistributive economy, solidarity economy, or need-based economy instead of greed-based is the need of the hour.

In the current scenario of limited natural resources, a redistributive economic model administered by welfare states seems promising. Particularly for the most vulnerable population, the welfare state can actualise safety nets or protection during catastrophes while checking the capital's exploitation of resources and people. The economic system needs to be transformed, or we will surely be eking out a living on a much less hospitable planet.

To prioritise the planet over profit, it is essential to localise, democratise and decentralise the process of financial decision-making and get rid of the dictates of global capital giants and powerful nations. On the one hand, this will give people, communities, and nations autonomy to decide what is essential and needed for them. Autonomy from the global to the local level in trade, food, agriculture, economic model, lifestyle, culture, etc., is imperative in the sustainability journey. These systemic changes also imply restructuring the current social-political-economic model and power relations. Non-system-threatening solutions such as a market-based mechanism for carbon reduction pushed by the governing elites (both nations and capitalists), the drive for changing personal lifestyles, population reduction, or relentless wait for technological miracles allow the present dominant system to scale down the responsibility. The need of the hour is to restructure this powerset entrenched from the global to the local level.

In this regard, I take Indigenous peoples as an alternative to the dominant model and locate them as workable alternatives. I suggest that indigenous peoples, their ecological knowledge and practices can contribute to existing efforts to tackle the climate crisis. I also think they can offer alternative value systems and paradigms to the system that has caused the escalation of the ecological crisis in the first place. In terms of protecting the environmental commons, many indigenous communities have efficiently managed the ecosystem around them for ages. For them, sustainable use of resources and governance of 'commons' becomes the way of life since they recognise their symbiotic

relationship with nature and creation. With a sense of communal morality and belief system, they live together, resolve conflicts, make collective decisions, and strengthen a sense of unity and community. They teach the values of respect for all animate and inanimate beings. For instance, the last reserve of forests around the globe lies within the territories of indigenous peoples, who have used it without degrading it. However, the forest policies, such as in India, have depicted them as the degrader of forests and ecosystems and driven thousands of indigenous peoples out of their forest land.

Regarding food sustainability today, Indigenous people offer an alternative to the ailing food and agricultural system. The present food system relies on monoculture. It depends heavily on water aquifers and fossil fuels, chemical fertilisers, and pesticides that have jeopardised not only ecology (land, water, ecosystem, and biodiversity) but also the health of human beings. Often this has reached a point of no return, especially biodiversity. Indigenous people offer local-self-dependent, sustainable, resilient, nutritious food and agricultural systems as an alternative. For instance, among Indigenous peoples, seeds are conserved and enhanced for ages to suit the local ecosystems and needs of communities, which are thousands in numbers. Communities, in turn, are also essential in this knowledge and practices of sustainability. For instance, to maintain the fertility of the soil, crop rotations in a field are mandatory for maintaining the fertility of the soil in a field. This is done freely as at least a few members of the community necessarily plant the particular seeds for that year to avoid any eventual termination of the seeds. The seasonal exchange of

seeds, its associated dependence and interactions bind the communities. The non-anthropocentric worldview, reverence of ecosystem components, making of morality within communities, and sustenance of knowledge and practices, tested for thousands of years and in hundreds of circumstances, make indigenous communities a template to be studied for alternative ecological sustainability at the local and global levels.

Conclusion

The Climate crisis is deepening everyday to the point where the survival of humanity is in question. In the current economic and developmental paradigm, ecological redemption seems impossible since it is based on relentless growth, profit inequality, and exploitation of people and resources (typical of a capitalistic economy), which is the antithesis of ecological sustainability or good life for all. Therefore, despite being aware of the catastrophic implications of the climate crisis, the urgency of implementing concrete solutions is relegated to low priority. Without moral and ethical communities, all aspects of ecology (resources, emissions, climate crises etc.) cannot beckon a worthy global and local response to the deepening ecological crisis. It calls for a fundamental restructuring of developmental paradigms, concepts of well-being and growth, and subsequent restructuring of local and global policies. The system requires to make a radical shift. We must consciously and collectively shift from a greed-based model to a need-based model; from capital accumulation to the redistributive mechanism of resources and common goods; and from a globalised market-controlled system of food, seed, technology, trade, and economies to a

localised autonomous system. The democratisation of economic and ecological decisions is imperative to realise a safe and healthy planet, people and ecosystems.

It may not be possible to address these problems within reformed capitalism. It can happen only within a post-capitalist, ecological economy geared to production for need, not for profit, a system of cooperation, collectivism, and togetherness. It will help develop resilience for vulnerable people to adapt to unforeseeable disruptions and ways to manage in an unbalanced world. Avoiding crossing this red line is a massive and urgent undertaking that cannot wait for new technological miracles to arrive in a few decades. The most vulnerable must be in front of imagining, framing, and implementing any climate policy.

In this regard, indigenous people offer instances of climate solutions at the local

levels, templates to manage national and global ecologies and to realise sustainability in different contexts. They also challenge the system that causes climate crisis at first-place premiers in crisis-making by offering an alternative to food systems, autonomy, solidarity, and non-profit-oriented economies. (non-anthropocentric worldviews). Indigenous peoples across the globe provide options in their system, and they have proven for ages that instances of sustainability have been consistently ignored in academia and practices. Although historically relegated to irrational, unscientific, unworkable, local, and non-universal, the indigenous systems offer hope for the crisis-ridden world. Like the 'keeper of the seeds' in the movie '*Mad Max: Fury Road*', they plead to the world for water, land, an ecosystem, and autonomy, so that they can save themselves and save the world from ecological catastrophe.

Original in English



Forest People and People's Forest

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A rather poetic observation of a colonial officer of Jharkhand by the turn of the last century goes like this,

Chotanagpur is one long undulating sweep of hills throughout.... Its Centre is a vast plateau... All are covered with more or less with thick tree jungle...while the lower and more undulating slopes grow vast tree forests that stretch over the land for miles around. The whole forms one of the most charming series of views imaginable. The far-off hills in the background, in exquisite tints of blue or purple as the light falls; the nearer hills picturesquely shaped and luxuriant in every shade of green, with their bold escarpments in black or grey; and the plains below furnishing their quota of colour in the tender green of the early rice, the brilliant yellow of the *sirguja* (*millet*), or the gold of the fields at harvest, - present a panorama of perfect charm and beauty. (Bradley-Brit, F.B. 1910:2)

Bradley gives the wayfarer's description of the country of forests and hills and the social milieu of the land. He is, however, not an exception to his genre. Whoever wrote about the land and the country's people could not but be impressed by the

co-existence of nature and culture in a perfect balance. About half a century before Bradley's observation, things were even more idyllic.

The description of the journey of a group of Christian missionaries to the villages of the Adivasis (Indigenous Peoples) in the middle of the 19th century makes one feel that he is in a dreamland of mythology. The villages were nestled in dense and biodiverse forests, known to the outer world as the glorious 'land of the forest', literally Jharkhand.

A steep, arduous road leads through the mountains full of jungle thicket. It is rather difficult to find the path because the grass and shrubs have overgrown all over during the rainy season... For a long time now, we have been peering over for the place that is the destination of the trip, but in vain. That dense undergrowth prevents any view. Finally, the forest becomes thin. We arrive on an exquisite hilltop giving a free view all around. Down below, a lovely valley is visible. A magnificent river flows through the valley joined by its tributaries. At the mouth of the latter or even further back there are small villages surrounded by groups of tall trees. From the mountain slopes, go

down the terraced green and wavy rice fields. Above them there are grassy slopes, on which the goats and sheep graze. In the plain, pulses and grain fields are there together with pastures for cattle, which have cosily laid down on the mud under the shadow of trees. Again, back to the forest, dense tangled underbrush, and then old and high trunk of trees, in groups, sometimes a few palm trees proudly swaying their top in the wind. If there is somewhere in the world a place of peace one may think, it must be here, the villages in this paradisaical location are so cozy, quiet, and peaceful. Nothing of the curse of noise and the hue and cry of the cities pierce our ears. Only harmonious ringing of the herd bell from the pasture and the clear voices of the children are heard echoing through the basking bright air" (Bara, Dominic. 2014:173-4).

The 19th century was the turning point in the history of the indigenous people living in these villages. The sounds of the marching boots of soldiers and hooves of the galloping horses broke the peace of forestland with the scale of brutality that nobody ever dreamt of in their foulest nightmare. The bows and arrows they never used against humans turned out to be the only defensive weapon. But the powerful aliens, *saheb* (British) and *diku* (*Zamindars*-landlords and contractors) trod on every corner of their country in packs and herds.

In the early 19th century, when the British East India Company's army invaded the 'woodland of Bengal', they were confronted with the valorous forest peoples. They called them 'the noble savage'. The term echoed the observation of the *Arthashastra* (2nd century BCE - 3rd

century CE), which called these people the *atavikas*, the forest people, who preferred to live outside the state system and under their egalitarian polity. However, the state system of the Gangetic plains began to intrude into the Chotanagpur plateau even before the British, way back in 1676 when the first *Jagir* (fiefdom) was granted to the outsiders by the local chieftain posed himself as a *Raja*, meaning King (Hoffman. 1950:2933). The British colonialists invited 'civilised' aliens from the plains to rule over them and share the booty. Inhuman exploitation of human labour and wonton destruction of physical nature caused a 'dust storm and hanging mist' on earth; the green land became as white as curd, and 'the transparent waters of the river became red like the setting sun'. A hundred-year-long resistance movement ensued.

The Christian missionaries appeared amidst this critical juncture of the people. The first group of them, of Gossner Lutheran Mission, preferred to come to this forest-clad upland, overwhelmed by the people's simplicity and righteousness. The Roman Catholics followed them soon in the middle of the 19th century. Both missionary groups held a view contrary to that of colonial rulers about 'savages' or the 'janglees', as the local lackeys derogatorily called the inhabitants. They stood by the side of the forest peoples, the sylvans of the past. They found it immoral to crush the life of the people who lived in a symbiotic relationship with nature and a society that upheld egalitarian values.

Years later, in the present century, the aspirations of the people and the views of the missionaries in support of them found legal and moral sanctions in the form of the Forest Rights Act (2006) enacted by the Indian Parliament and the encyclical

Laudato si' (2015) of Pope Francis. The paper attempts to capture this transformation of the national state policy and international approach to nature conservation.

Colonial Forest Policy

Before the start of the colonial era, Swidden cultivation (*daha/ dhya* or *jara*) was widespread. Plough agriculture was introduced in some pockets by the medieval 'jungle' states. The notion of land belonging to the king as the 'lord' paramount of the soil was absent. All the livelihood resources and products were under the control of the community. Forest was an integral part of the economy and carried spiritual connotations.

When the British East India Company entered the plateau, they found the villages nestled in the laps of lush green forests with highly precious *Sal* trees and other species of high timber value that they needed for ship-building, underground mining and railways. They set the twin objective of 'revenue from the land and timber from the forest'. "Colonialism made a distinction between public and private domain. The environment was made public and agriculture private. Such a division of landscapes and social spheres came to characterise the large aspects of modern state formation" (Shivaramakrishnan 199:80). Tribals were curbed from practising shifting cultivation and were assigned to specific terrain to live, unredeemable form 'backward agriculture'. (Shivaramakrishnan 199:81). By the 1870s, the southwestern part of woodland Bengal - the emerging tribal heartland - was taking shape as a landscape where two policy elements converged. One element worked to hasten

the gradual transformation of wildlands and wastelands into an ordered terrain of fields and groves. The other element was the policy of forest conservation." (Shivaramakrishnan 199:86)

The declaration of Lord Dalhousie in 1856 proclaiming all the healthy forests with high timber values as the property of the British Raj set the ball rolling. The Government Forest Act 1865, with effect from May 1, regularised the process of grabbing forests from forest dwellers. This Act turned all the common community property into state property and alienated the masses from the ownership and management of the forest. The process that began under the Indian Forest Act of 1865 to replace the community-governed forests with state management got consolidated in the Indian Forest Act of 1878. It changed the traditional pattern of resource use. It made timber a vital commodity, which in turn fundamentally altered forest ecology (Gadgil and Guha. 2000:85). The dominant forest structures changed from all-aged, diverse, and naturally regenerating jungles to simplified, even-aged monocultures, often dominated by *sal, teak and pine* (Jewitt. 2004:62). In the Chotanagpur region "during 1893-94, Forest Settlement Operations were launched and measures taken to prepare a record of forest rights. Villages in forests were 'marked off in blocks of convenient shape' consisting of not only village sites but also cultivable and wastelands 'sufficient for the needs of villagers'. Outside the block lay the protective forest areas... Petitions were submitted by the people claiming resumption of what they called their old rights... Birsa Munda, the legendary leader of the Ulgulan (revolt of 1900), also led a number of *raiya*s to petition for remission of forest dues" (Singh. 1966:37).

It was a coincidence that the Belgian Jesuit missionaries arrived at this volatile situation dotted with constant revolt and agitations of the people against the forced alienation of their ancestral natural resources to initiate the Mission work in 1869. They joined the German Lutheran counterparts, who had been in the area 24 years before, to redress the people's grievances. But the reason for the phenomenal success of Fr. Constant Lievens SJ was that "his apostolate *fulfilled the needs of the people*. Lievens and his companions were not afraid to adopt *an approach that was bound to conflict with vested interests*. Instead of directing their efforts towards the landlords and encouraging them to have compassion on their tenants, they worked on the side of the oppressed – fostering their desire to take their destiny in their own hands... Rather than preach the Cross to their people, these courageous missionaries preferred to face it themselves" (Noronha, Alvino. 1975: xviii).

Consequently, they faced the wrath of landlords and traders on the one hand, and the administration's dismay, on the other. Church properties were destroyed, and the Government asked them to focus on their mission work rather than fighting the land grabbers in the court. But that could not deter them. Fr. Jhon Baptist Hoffman followed the footprint of Lievens but on a much larger scale. He did not fight court cases in favour of the people but planned to bring changes in the judiciary to uphold the people's rights over resources. The outcome of his relentless work and crafty negotiations with the administrators resulted in the historical Chotanagpur Tenancy Act of 1908.

The Act recognised the resource rights of cultivators (*raiyyats*) and accepted the

descendants of the original settlers, *Khuntkatidar* and *Bhuinhar*, as the 'proprietors' of the land and forest under their control. It recognised the collective ownership right of the lineage brothers over the whole village that was, till then, remained outside the pale of the landlords and other aliens, known as *Khuntkatti* village. The same proprietorship right was recognised for individual families with ancestral land under control even though the aliens intruded on their villages. They were called the *Bhuinhar* and were at par with the Zamindars. The Act also recognised the traditional forest resource rights of the people in their village forests. However, the majority of Adivasis who lost their land rights to the Zamindars (landlords) remained deprived of their resource rights and were treated as simple *raiyyat* or ordinary cultivators. The most outstanding achievement of the Act was that it prohibits land alienation from all these three indigenous peoples' categories. The Survey Settlement Operations began immediately after that. Unfortunately, Hoffman could not witness this great triumph of the people in the district of Ranchi, where the Records of Rights or Land Titles were prepared in 1932. Sadly, he was repatriated to his homeland Germany as a citizen of an enemy country by the British Government in 1915. But his 'heart and soul remained' in Ranchi until he died in 1927.

Post-independence Forest Policy

Immediately after independence in 1947, the Government of India adopted The National Forest Policy (1952). It personified deep-seated antagonism between the state and forest-dependent communities when it stated, "the accident of a village being situated close to a forest does not prejudice

the right of the country as a whole to receive the benefits of a national asset" (Poffenberger and Singh 1996:61). The newly born country adopted political democracy but continued to practice bureaucratic tyranny, it framed a constitution that upheld rights of the people. Still, it let the state mechanism curtail that as a colonial legacy. Adivasis were the most deprived lot.

The people's hopes to regain their land and forest in independent India were shattered. The state did not scrap the colonial Indian Forest Act of 1927, the last in the row of the draconian Forest Acts of 1865 and 1874. According to the Permanent Settlement, the village forest was the property of the Zamindars. Wanton destruction of the forest to meet the demand of the 2nd world war by the Zamindars. After the Zamindari system was abolished, "all the village forests, as well as the Khuntkatti forests, were taken over by the Forest Department, on the pretext of the scientific method of management" (Working Plan: 1962:6). Thus, it took about hundred years (1856–1956) for both the colonial and independent Government to destroy the system of people's ownership and management of forests in Jharkhand. But that was not an end to the suffering of the forest dwellers. Now they were declared encroachers of the forest and to be thrown out of the forest under the Forest Conservation Act 1980.

Forest Rights Movement

The identity and autonomy movement of Adivasis, leading to the formation of the new State of Jharkhand, materialised in 2000. A few activists of the autonomy movement, including the author, decided to take the issue of restoring the people's

lost rights over their ancestral forests. *Jharkhand Jangal Bachao Andolan* (Jharkhand Save the Forest Movement) emerged out of that initiative from the soil of Birsa Munda and the chosen land of intervention of Fr. Jhon Baptist Hoffman. It started in the district of Ranchi (now Khunti), dotted with Munda villages with predominantly Christian families and some followers of Birsa Munda who call themselves Birsaites.

The district was losing its forest progressively over the years. S.C. Roy (1912), the father of Indian Ethnology, based in Ranchi, reported that about one-third (32.10%) of the area of the district was under forest cover during the first decade of the century (20th century). By the end of the 60s, it was reduced to 1,679 sq. miles or 23.83 per cent of the district's total area. Anthropologist Prof. Sachchidananda observed, "At one time, the major portion of Ranchi district was covered with dense forests. Today the central and eastern plateaus are almost denuded of forests, and only small scrub jungles with a few big trees, are found on the hills" (1979:36). According to the 1981 census, the district had 23% of its area under forest cover. This figure had further come down in 1991. Over the years, the forest area has not decreased but certainly does the forest itself.

JJBA joined the National Forum of Forest People and Forest Workers in 2002 as a co-founder. The Campaign for Survival and Dignity was another all-India level forum to raise the issue of forest rights of the Adivasis. The power of the popular movement emerged so strong that both the ruling and opposition parties recognised the demand of the forest dwellers and incorporated it in their Election Manifesto of 2004. By 2006 the age-old dream of the

people became a reality. The Congress Government at the Centre passed the historical Scheduled Tribes and Other Forest Dwellers (Recognition of Forest Rights) Act 2006.

In its preamble, the Act admits that “a historical injustice has been committed to the forest-dwelling people during the colonial times and even after independence.” The Act is radical and epoch-making legislation in every sense. It accepts that the Forest Dwellers only know the forest and hold traditional biodiversity knowledge. It recognises that forest rights are already vested with forest dwellers. The state is only to record it and provide a title to them as collective and individual rights holders of the forest. The village community now has the right to “protect, regenerate and manage the village forest”. The right of the foraging communities to freely roam around in the forest and gather forest produce is now recognised as their habitat right. Besides, there are 11 more related rights that the Act recognises.

However, it is also observed by a section of the critiques that the Act is a part of the international effort to curb carbon emissions and increase carbon sequestration by using the free labour of forest dwellers. The modern world today has witnessed the disastrous impact of this change in cultural values on nature and, consequently, on human beings. Massive deforestation and destruction of ecology to fuel the engine of the feudal and capitalist economies have now started hitting back in the form of climate change, shortage of fresh water, desertification, landslides, droughts and floods. The realisation that nature has to be protected calls for a dramatic shift in attitudes towards Adivasis, especially in the dominant

society. The people once looked down on as *ahistorical* (without a future), *uncivilised*, *animal-like*, and *backwards* and their culture as evil and dangerous are now suddenly being graced with the epithets of ‘the protectors of nature’, ‘knowledgeable of biodiversity’ and their culture as ‘worthwhile’ and ‘sustainable’. The indigenous people are praised because the forest has to be protected, and they are seen as the people who can do it better than the state apparatus (forest department).

FRA 2006 is not an isolated incidence. The capitalist world is trying to rope in the forest dwellers with its objective of protecting and regenerating forests to get over the commitment of cutting down the Green House Gas emission under the Kyoto Protocol. The strategy of REDD (Reducing Emissions from Deforestation and Degradation) and REDD+ of the UN is already under operation in many Asian countries. National Green India Mission is a primary mechanism to meet the capitalist demand for carbon trading, which is unethical, unjust and against Mother Earth. The irony of the situation is that the Green Hunt is preceding the Green India Mission! One is to whip, and the other is to tame the Adivasi!

Contrary to this allegedly selfish and unethical capitalist solution of the impending threat to life caused by capital and lifestyle promoted by capitalism, the Indigenous world is providing a just solution. The countries like Ecuador and Bolivia are spearheading this. Indigenous Peoples globally celebrate the historic passing of the ‘Law of Mother Earth’ by the Parliament of Bolivia in 2009 as a great victory for their cultural value.

Under the leadership of Evo Morales, the first indigenous president of Bolivia, the Constitution of Bolivia has been amended to uphold the Right of Mother Earth. The new legislation grants rights to Mother Earth that human enjoys.

President Morales also announced that he would be “dismantling the privatisation model,” thereby expropriating privately owned zinc, silver and tin mines.

Foreign Minister David Choquehuanca said Bolivia’s traditional indigenous respect for the *Pachamama* (Mother Earth) was vital to prevent climate change. “Our grandparents taught us that we belong to a big family of plants and animals. We believe that everything on the planet forms part of a big family. We indigenous people can contribute to solving the energy, climate, food and financial crises with our values,” he said.

Inspired by Bolivia in 2009, the UN General Assembly proclaimed April 22 as International Mother Earth Day. It expressed its conviction that to balance the economic, social and environmental needs of present and future generations, “it is necessary to promote harmony with nature and the Earth.”

In October 2009, the General Assembly named President Morales the “World Hero of Mother Earth.”

The Forest Rights Act (2006) and Law of Mother Earth (2009) soon received massive support from Pope Francis in the form of an Encyclical, *Laudato si'* (2015).

The World Wakes-up

The environmental and forest rights activists all over the world in general, and the Adivasis of Jharkhand, in particular,

were overwhelmed by the radical approach of Pope Francis to save the common home of all living beings, the earth, from an imminent environmental disaster. People realised that Pope Francis is speaking to people of all faiths, not as an eminent leader of a religion but as a humble and noble son of this Mother Earth. In his encyclical, he echoed the cry of the earth and the cry of the vulnerable people. He recognises the beauty of the creation and calls them ‘sisters and brothers’ like St. Francis of Assisi, that make the common home. In Pope Francis, people have found a crusader who strives to build a new ‘civilisation of love’ by dispelling all the forces that debase humanity and promote the relentless exploitation and abuse of humans and nature for selfish greed. They find him giving a clarion call for change “in lifestyle, models of production and consumption, and the established structures of power which today govern societies”.

Pope’s radical approach to ecological concern already created an uncomfortable ripple in the camp of the Right. Criticisms abound in the boardrooms and media; naked revolts are not far behind. Especially after he visited Latin America, the capitalist world had several syncope. On the contrary, the struggling working people cheered when His Holiness condemned capitalism by saying, “unbridled capitalism is the ‘dung of the devil’”. He distances himself from the Right because he dreams of a ‘civilisation of love’, ‘universal brotherhood’ and the ideology of a bio-centric world. The age-old belief of ethnocentrism is the foundation of a human-centric economic growth that forgets ‘God’s design of creating humans as custodians of the rest of His creation on this earth’. Right teaches

us to see everything as human property and entices us to use it for ourselves alone. It turns us into irresponsible consumers. Ever expanding realm of selfish consumption leads to the over-exploitation of nature. We are not satisfied with the milk of love that mother earth can provide us; we crave more, and greed condemns us to suck her blood. It makes us morally and physically sick, and we also make her sick. Capitalism symbolises man's insatiable greed and takes him to the doorsteps of commotion, war, fratricide, and brutal violation of feminine dignity that eventually destroy love.

Love for humanity takes us to the Left. While the Left mobilises us for our rights to natural resources, it has so far failed to uphold the rights of mother earth and the dignity of all our sister creations, animate or inanimate. Left stands for human freedom but fails to appreciate 'the consequence of infinite freedom'. Socialism upheld the conflict between man and nature as the cause of human progress. Consequently, the socialist states entered into competition with the capitalist world to satisfy greed, to consume as much as the rich of the other world enjoy. They ended

up in an economic collapse and an environmental disaster.

The 'encyclical' places Pope beyond the dialectics of the Right and the Left but not at the Centre. He does not present a centrist approach to human ecology; his approach to caring for our 'common home' is not a self-deceiving approach of promoting a win-win situation between the devil and damsel. His acceptance of the crucifix on hammer and sickle designed by the murdered Jesuit Priest Reverend Luis Espinal from the hands of the leftist Evo Morales, the then president of Bolivia, may be seen as a remarkable ideological shift towards centre-left but with a broader ideological perspective. He calls for civil and political actions to realise the 'civilisation of love'. In this context, 'love thy neighbour' assumes a broader meaning, all the creations that surround us, the sun and the moon, the wind and the clouds, the birds and the bees, the flowers and the fountains, trees and the mountains become our sisters! Let all people, irrespective of class and creed, join in chorus with him and let the world hear what he proclaimed, *Laudato si'*, 'Praise be to you' (Mother Earth)!

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Consumeristic Culture and Need for Socio-Personal and Politico-Economic Will

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The earth is estimated to be around 4.543 billion years old, and humans have existed for the last 200,000 years. Throughout history, human beings, as all living beings, have been subject to the physical and biological changes of the earth and have harmoniously evolved by adapting themselves. But, in recent centuries, the earth has been threatened so that it is subject to fast and fatal changes. Not surprisingly, the victims of the ecological crisis are often the poor and those who contribute the least to the situation. The human being has become aware that this crisis, as referred to by Pope Paul VI in his Apostolic Letter *Octogesima Adveniens* in 1971, is 'the dramatic and unexpected consequence of human activity,' and so is in search of remedies to this crisis. We explore a few core causes of concerns and possible remedies to rectify them here.

Causes of Concern

It is not enough to find remedies for the symptoms of the socio-ecological crisis. We need to search for the roots of this crisis, and only then can the remedies be apt and effective.

1. *Magnitude of the changes:* Change is an integral part of the earth's processes, but the difference today is that the magnitude

of the change is such that the earth's conditions are disturbed beyond its capacity for self-regulation, technically called 'homeostasis'. For example, the planet earth has undergone several periods of intense cold and intense heat, but never with such rapidity.

2. *Magnitude of human interference:* Human activity, like that of any living being, has always had effects on its environment; but today, its scale is disproportionately immense. The result is environmental pollution, deforestation, climate imbalance, destruction of ecosystems and habitats, mass biological extinctions, and scarcity and imbalanced distribution of resources. Biological extinctions, for example, are a natural phenomenon. But never in history has it been so fast, and never so because of another biological agent. Besides, generally, speciation is much faster and more robust than extinction, which is why biodiversity has increased over time. However, today, the relationship between these two phenomena has reversed because extinction is no longer just natural but has become anthropogenic.

3. *Universality of the effects:* Everyone globally experiences the brunt of this crisis, as the Covid19 pandemic only confirmed

how universally we are interconnected today. Both those responsible for the changes and those not are directly and/or indirectly affected. Whether it is the depletion of resources or the dissemination of toxic chemicals in the air, water and soil, all human beings and nature are severely affected.

4. *Differentiated impact of the effects:* Although everyone is affected by these phenomena, poorer people and non-human beings are more vulnerable. That is why Pope Francis asserts that “a true ecological approach always becomes a social approach; it must integrate questions of justice in debates on the environment, to hear both the cry of the earth and the cry of the poor.” (LS § 49)

Roots of the Menacing Attitude

This crisis is not just a physio-biological phenomenon but, more deeply, a matter of our attitude and worldview. The ecological crisis has its roots in the attitude of human beings towards themselves, God, other humans and creatures.

1. Roots in the Modernist Worldview

In the 17th century, with the dawn of modernity, philosophy began to divide the world into two distinct categories: *res cogitans* (mind and consciousness) and *res extensa* (physical world). Although a dualistic conception of the world existed earlier, modern philosophy introduced the change that the universe is now considered a vast machine and no longer a complex system composed of living and non-living things. Then, trying to free itself from the influence of the theology and religion of the time, philosophy began to put itself at the service of science and technology. On the one hand, philosophy adapted itself to

scientific progress, and on the other hand, physical science felt supported by philosophy. The result was a strong dualism that nurtured an idea of the domination of *res extensa* by *res cogitans*. To be the centre of the universe has always been a strong temptation for humanity (Gn. 8). René Descartes (2006:51) announced that the goal of the natural sciences was to help the human being be “master and possessor of nature”. But how to do it? This new dualistic perspective would be through science and technology, for, as Francis Bacon (1884: 71) celebrated, “Knowledge is power”.

This gap was further widened with ethics by Immanuel Kant. Indeed, Kant valued the human person positively by considering every person as an end-in-himself/herself and never as a means. But his overemphasis on the superiority of rationality resulted in three pitfalls. First, as J Baird Callicott (1999:252) caricatures, “Kant’s ethic would therefore seem to countenance painful medical experiments on prerational human infants, hunting nonrational human imbeciles for sport, and making dog food out of post-rational elderly human beings....” Second, since only rational beings can self-evaluate, all other beings – living and non-living – have only instrumental value, not intrinsic value. Third, according to the criterion of reciprocity, only moral agents are considered moral patients. Therefore, moral considerations take into account only human beings, and any interference with the non-human world is acceptable as long as it serves human interests.

2. Postmodern Pragmatic Relativism

With the death of modernism, we entered another complex era called

postmodernism. With postmodern deconstruction, which resists all grand narratives, relativism was born. The result was no longer doctrinal relativism but pragmatic relativism. Pope Francis points out that, in pragmatic relativism, there are no longer “objective truths or sound principles other than the satisfaction of our own desires and immediate needs”; similarly, “the culture itself is corrupt and objective truth and universally valid principles are no longer upheld, then laws can only be seen as arbitrary impositions or obstacles to be avoided.” (LS § 123)

A human puts himself/herself at the centre of the world by giving absolute priority to his interests so that everything else becomes relative. This pragmatic relativism is even more dangerous than doctrinal relativism. By thus claiming to be the master of the world, for whom nothing that does not concern him matters. The human being places himself/herself at the summit of creation and evolution. The result is a ‘distorted’, ‘excessive’ and ‘misguided’ anthropocentrism that elicits human domination over all non-human beings – and often even defenceless human beings – by viewing them only for their instrumental value. (LS §§ 69, 115-122)

3. Socio-cultural roots

Careful observation reveals that the ecological crisis results from the consumerist culture, often in the urban areas, and its consequent changes in the structures of lifestyles. In the words of Pope Paul VI, it is a culture born of “the most extraordinary scientific advances, the most amazing technical abilities, the most astonishing economic growth” but not accompanied by “authentic social and moral progress” (LS § 4). Admittedly, the

ecological crisis is amplified or slowed down by individual choices; but it is thus much more due to the structures/societies in which people live. On the one hand, people in urban areas feel that they are, in some sense, beneficiaries of this urban culture, but ironically their freedom to make choices is itself restricted. They live in a setting where the conditions of choice are predetermined by the political, economic and market structures.

On the other hand, people in rural and environmentally precarious areas, though neither living nor enjoying the benefits of urban life, must work for the subsistence of this consumerist culture. Its adverse effects are felt back in their rural/precarious area – a process called ‘*telecoupling*’, which refers to interactions of social, economic, and ecological systems over distances. Those who suffer its effects are not necessarily responsible for it, and the latter often remain unaffected directly. As a result, either on a personal level or on an economic and political level, those responsible ignore the consequences of their actions and see no reason to change policies or lifestyles. Subsequently, even being aware of the crisis in which we live, we remain indifferent to calls for an ecological conversion.

In Search of Remedies

As Adolphe Gesché (1994: 85) postulates, for a human project – like the safeguard and integrity of creation here – to have every chance of success, it is not enough that it be driven by political, ecological, economic or even moral will. It must be founded upstream on a philosophical and metaphysical level and, for the believers, also on the theological level. So, the remedies we search for today need to have

both attitudinal and structural revolutions, which in turn must govern lifestyle and all scientific ventures.

1. Change in the Worldview/Attitude

Firstly, we see here the attitudinal revolution that we need today.

a. *From deviated anthropocentrism to balanced ecocentrism:*

Human behaviour, as Callicott (1999: 89) observes, is always influenced by beliefs about what facts are. So, a rectification in our judgments about the facts can result in rectification in our behaviour. In this context, a *balanced ecocentric worldview* is a crucial solution. The thesis of ecocentrism is that all beings have intrinsic value. The modernist idea of the human being as the pinnacle of creation/evolution led him to think that he has a special place in this cosmos and has the right to exploit all other beings without giving them the place they deserve. But one must realise that the cosmos existed even before the advent of the human being, who is only one among the billions of species, and, therefore, is only one among other members of the biotic community, or more broadly, of the ecological community. So, every being – humans, animals, plants and material things – has its intrinsic value, and there is a human-nature unity and totality.

b. *Ecological community – Naturalisation of human beings*

In the 19th century, Darwin made evolutionary discoveries which dethroned the human being from his/her role as “master of the world”, an idea which had developed from the anthropocentric interpretation of the subject-object dichotomy. In Aldo Leopold’s terms,

humans realise that they are “only fellow voyagers with other creatures in the odyssey of evolution. This new knowledge should have given us, by this time, a sense of kinship with fellow creatures....” (1968:105). It is this knowledge and feeling that St Bonaventure notes in Saint Francis of Assisi: “from a reflection on the primary source of all things, filled with even more abundant piety, he would call creatures, no matter how small, by the name of ‘brother’ or ‘sister’” (LS § 11).

Jürgen Moltmann, (1988: 73) using Günter Altner’s expression, calls this the “naturalisation of the human being”. Moltmann explains that the human being is not opposed to nature but a product of nature. Nature is a great subject that produces new forms and structures of life and, ultimately, the human being. The human being is, therefore, the object, namely a product of productive nature. In the modernist model, the human being ‘has’ nature; in this *ecocentric* model, the human being ‘is’ nature, and the body he has objectified as his property, is himself in his corporeal existence.

2. The Transformation of Societal Structures

Political and economic systems form societal structures. Therefore, for ecological conversion to occur effectively, political and economic systems must be transformed by the worldview, as mentioned above or attitude, at both local and global levels.

a. *Holistic ethics and economic-political commitment*

First, as discussed earlier, the current crisis results from excessive human interference. So, environmental ethics must be applied,

not only at the personal level but also at the societal and global level, since the latter is a holistic ethic. Secondly, the current ecological crisis is also a result of the consumerist culture created through political and economic systems. So, as Callicott (1999: 285) puts it, realising the environmental dimension of well-being will require collective effort and political will. We must demand that our local, regional and federal governments put ecological issues at the top of their political agenda. Governments must realise that the common good is their *raison d'être*, and work towards it with genuine global urgency.

b. Informed politico-economic system

Increasingly, the global economy and productive and commercial activities are based on immediacy. It favours a kind of technological advancement of automatism, intending to simplify procedures and reduce costs with fewer workers replaced by machines. However, “the cost of the damage caused by such selfish lack of concern is much greater than the economic benefits to be obtained.” (LS § 36). Therefore, there is a need for the conscientisation of everyone, particularly of political and economic actors, and sometimes also for political coercion, so that political will can bring about healthy structural changes at political and economic levels.

c. Universal solidarity, leadership and participatory governance

The laws and policies enacted must consider both the needs of human beings and the earth. So, political and economic debates, both international and local, must take into account: on the one hand, the common good of all humans, especially the

poor and the vulnerable, considered pure collateral damage; and on the other hand, an environmental impact assessment, done in an interdisciplinary and transparent manner, independent of any economic or political pressure. For this, there is a need for universal solidarity, especially among politico-economic communities, and strong leadership that comprehensively understands societal and environmental issues. They must support consideration of all the ethical aspects concerned by creating spaces for discussion and scientific and social dialogue “in which all those directly or indirectly affected (farmers, consumers, civil authorities, scientists, seed producers, people living near fumigated fields, and others) can make known their problems and concerns, and have access to adequate and reliable information in order to make decisions for the common good, present and future.” (LS § 135)

Conclusion

Cultural, scientific and economic development are part of the evolution process of human society. However, we must remember that a “technological and economic development which does not leave in its wake a better world and an integrally higher quality of life cannot be considered progress.” (LS § 194). As Lynn White (1967: 1203-1207) points out, what people do about ecology depends on how they feel about themselves concerning the things around them – in short, it is an attitude. So, with a *balanced ecocentric attitude*, accepting that all creatures have value and that humans are part of nature, and coupled with a proactive socio-personal and politico-economic will to remedy this crisis, it is possible for humans not only to remediate the current ecological

crisis but also to enter into respectful
“relationships, going out from themselves

to live in communion with God, with
others and with all creatures.” (LS § 240)

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The Interconnectedness of Biodiversity and Human Well-being: A Personal Reflection

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My definition of biodiversity is the existence of the 'right proportion of flora and fauna in a given village, district, state or country to sustain life, livelihood and economic activities sustainably.' Biodiversity varies from place to place depending on weather patterns, climatic conditions, etc. So, a desert's biodiversity differs from a hill station or plain land. People live in different geographical and climatic conditions; biodiversity applies accordingly to these places or climate zones. So it is imperative to look at biodiversity from a holistic perspective. At the macro level, local biodiversity influences geographical and climatic conditions to sustain life in all its forms. When human interventions or natural disasters affect the local biodiversity, it reflects on the entire system in a given place either immediately or gradually in the long run. So, it is essential to preserve biodiversity as it is directly related to the survival and well-being of human beings and other forms of life.

Pressure on biodiversity due to development activities, trade and natural disasters have increased manifold over the years. Over the years, what started as coexistence and living with nature has become dominant over natural resources,

leading to a loss of balance within the ecosystem and severe loss of biodiversity across the globe.

Many research studies and reports are available today to substantiate this claim that human development activities have started to affect biodiversity and the ecosystem irreversibly. Three factors have contributed to biodiversity loss: population growth, trade and industrial development, and technological advancement. These three factors, coupled with greed for money and power, have significantly contributed to biodiversity loss globally.

I want to share my own experiences of changes in biodiversity as a personal reflection. I was born and brought up in a valley, a small town in South India. During my school days, we used to catch butterflies and play with them. There were wide varieties of butterflies, and we used to catch and play with them and again free them to fly. There was some bond with nature right from my early childhood days. Every year, insects called *Sternocera* migrate to our village during a particular season. This type of insect is entirely harmless, and we used to feed them with tamarind leaves, put them in a container

with ventilation and develop a relationship with them as pets. It reflects the proximity of people in my village to nature. There were also fireflies that blinked and emitted lights. I used to catch them and play with them when I was young. Today, it is scarce to find butterflies, and even this sternocera has gradually disappeared. Now children are more occupied with mobile phones and watching TV serials. Our lives have become more mechanical and materialistic. We have lost the opportunity to establish a bond with nature and other forms of life in and around us, failing to recognise the importance of biodiversity and living with nature.

In my home town, every house used to have a minimum of one tree, either inside or outside. The house design was also in such a way as to accommodate a tree inside the house those days. This was three decades ago. Today indoor plants have replaced trees, and we have lost our relationship with nature with more concrete buildings in the name of civilisation and luxury. Elders in the village used to sit under the trees and chat while children played around. There was no pollution in those days, and we got to breathe fresh and natural aromatic air. Now things have changed. There is also a river, and we used to take baths and learn to swim. These memories are still fresh in my mind.

In the Book of Genesis, we hear of the importance of biodiversity. When God created Adam and Eve, He put them in the Garden of Eden. God created the right environment for us to live, nourish and multiply (Genesis 2:8, 15). However, today we go to the garden for a walk or relax or, in extreme cases, for a picnic. Development and luxury have taken us away from living

with nature. It is time for us to return to the right place and environment God created for us to live in.

I recently went to Kodaikanal, a hill station in the Southern part of Tamil Nadu. This place is a most desired tourist spot as people get to enjoy nature, mixed aromatic air flowers, trees, fruits and eucalyptus, etc. The moment I landed there, I could feel a difference in myself and stay there for a few days gave me new strength, and every being of mine was happy. I felt like I was a new person. That is the advantage of living with nature and having good biodiversity. I believe many health issues we are facing will go away, and secondly, people living in high biodiversity regions are healthier and live longer. You may also recall your experience of visiting a hill station or a biodiversity hotspot. Unfortunately, we get to spend time in these places only during vacation. However, many of us wish to make it our habit permanently.

Now I live in the capital city of New Delhi. We have created a heat island, making it difficult to live without an air conditioner, further contributing to climate change and biodiversity loss. Lack of awareness about the environment and availability of nature-friendly alternative solutions has only created more misery than leading people to make a lifestyle change.

The concrete building, framed structures, and lovely marble floors are fine, as they provide safe housing that can withstand all types of weather. However, completely walking away from nature and calling it more civilised is incorrect. God, our creator, has uniquely formed us to live with nature, and nature should be part and parcel of all our walks of life. There are many inventions/innovations which are

nature friendly and, at the same time, provide a safe house. It all depends on how we perceive things.

Food is vital for meeting our daily needs and provides us with the essential vitamins, minerals and nourishment for our growth as human beings. We depend on the ecosystem, biodiversity and forests to meet our varying food and other domestic needs. Some of the species that we use are collected from the woods. We get vegetables, Fruits, Paddy, Wheat and other cereals from the agricultural land. My state, Tamil Nadu, is known for its engagement in the agricultural cultivation of various crops, including paddy, cotton, corn, sugarcane, etc. Ever since the real estate sector entered the state and boomed, the percentage of agricultural land has started to diminish. The greed to acquire more wealth and prestige in society has resulted in heightened investment in buying lands and properties, resulting in a large amount of agricultural land converted into real estate business. The consequences of this are the rising prices of essential commodities, mainly agricultural produce, and the import of rice and other cereal from other states for a high price. These all lead to food insecurity over time. The lack of policies to regulate land use has also contributed to this. Failure of monsoon, water scarcity, and natural disasters are common in India, and this will also further add to the current food security crisis in the state/country. All these significantly affect the poor,

marginalised and downtrodden as they migrate to cities to find alternate employment opportunities. Their families are scattered, and they can't afford to buy essential commodities as the prices are skyrocketing.

We are not permanent residents of this earth. Whether we like it or not, we all have to say goodbye to this world one day. The psalmist (Ps. 103: 15-16) aptly mentions the life of a human being. "As for man, his days are like grass—he blooms like a flower of the field; when the wind passes over, it vanishes, and its place remembers it no more." Hence, our very focus of life on this earth is to add beauty to this world, and this should also be one of our main focuses in addition to having ambitious career and financial goals. We should reflect, 'How can my life on this earth make a difference to all creations? What is the legacy I wish to leave, and what will people remember about me and relate my life with?

The influence of the materialistic world on all of us is real. We tend to set our life goals based on the systems and values that run this world. But we are called to walk a different road and be forerunners of change and transformation, saving this world from destruction. Suppose one has to measure our success based on our contribution to mother earth - except for the ecologist, environmentalists and agricultural workers - we may fall far too short in sustaining mother earth and its lives. It is time we take a different road.

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Exploring the Implications of the Biotic Pump Effect

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The Centrality of Trees

After humans, the creatures most commonly discussed in the bible are trees. The story of Eden at the beginning of the grand narrative rotates around trees (Gen. 1-3) and the city of God that draws the over-arching story to close features healing trees at its gates (Rev. 22). Trees also feature prominently at key moments in between. Abraham and Sarah have their decisive angelic visitation at the oaks of Mamre (Gen. 18); the good life is repeatedly compared to a healthy tree (Ps. 1, Psalm 92); and the crafter of the cosmos hangs from a cross hewn from a tree in his final hours (Mt 27, Mk 15, Lk 23, Jn 19).

The complex role that trees play in the Scriptures reflects their central role in our ecosystems. Their roots stabilise the soil they grow in, taking up carbon dioxide and releasing oxygen. Their branches and the nooks and crannies along their trunks create their own microhabitats providing shelter for other biodiversity. They improve our psychological health. They bear fruit and flowers, and they offer a cooling effect in heat. They can mark the seasons, clean odours from the air, and provide us with wood for building, fuel, or pulp. As if this was not enough, they filter

rainfall and recharge groundwater supplies.

These last two benefits (from our far-from-exhaustive list) are significant. We have long understood that trees have a role in the hydrological cycle. Trees pull vast amounts of water from the ground and release it into the air in a process called *transpiration* (Taiz & Zeiger, 2002, p. 35). This gives them their hugely important role in flood prevention and water management. What is less well-known and understood is the role trees play in *precipitation*. The water released from the leaves of trees into the air helps create rain clouds which eventually fall again as rain. This is most commonly observed and studied in rainforests which help to create the rain that defines this ecosystem.

The Biotic Pump Theory

It is widely accepted that air masses that travel over vast areas of forest carry more moisture than air masses that travel over land which is not forested. The air that spans forests carries transpired water released from the trees. In this way, water molecules released into the air over the boreal forests in Russia are responsible for the freshwater that falls in China (Hance, 2012). The rain that falls in one area can be

highly dependent on the health of the forests in another (Irvin, 2017).

The Biotic Pump Theory takes this idea one step further. Water vapour, as a gas released from the trees in the forest, rises, cools, and condenses into droplets. This transformation from a gas to a liquid generates a change in air pressure which causes air to be pulled from surrounding areas of high pressure, including air heavy with evaporated moisture from oceans. Peter Bunyan, one of the theorists who has written extensively about the hypothesis (P. P. Bunyard, 2014), claims that the trade winds 'skimming over the Atlantic on their way from Africa to equatorial South America are sucked in as a result of cloud formation over the Amazon's rainforests' (P. Bunyard, 2015). A healthy, functioning forest pulls water in from the sea, so not only are forests responsible for contributing to rainfall, but also for helping to create the air currents that move masses of water around the globe.

If we destroy forests for short-term economic gain, we risk disrupting the rain cycles required for regenerative growth. Desertification may flow from deforestation. Because of their biotic pump function, our rainforests may effectively be the heart and lungs of the earth.¹ Air and water are essentials to life. If the biotic pump theory is correct, forests play an integral role in both the atmospheric and hydrological cycles. We call forests 'lungs' as they produce oxygen. But if intact, healthy forests are also partly responsible

¹ We might also say trees act like a renal system – in at least two ways. Firstly, the leaves can 'scrub' pollution from air as particulates can be physically caught on the leaves and, secondly, the forest ecosystem can help purify water as the tangle of roots and

for global air circulation, which includes pulling water-laden air from the open ocean. This makes them comparable to the function of the heart in the human body. Significant damage to this vital organ will make vast quantities of internal land prone to severe drought and even render it uninhabitable.

It is important to state that this remains an unproven hypothesis, albeit one with quite extensive literature from a dedicated group of researchers (Makarieva & Gorshkov, 2007a, 2007b, 2008, 2010; Cantin & Verdière, 2020). However, considering this theory leads us to examine its implications regarding our care for our common home. The pressures causing the current climate and biodiversity crises are conceivably causing and exacerbating a hydrological disaster. Human activity is disturbing systems so much that we may be removing the ability to pull water in from the sea, limiting its ability to refresh and replenish our rivers, streams, groundwater, and lakes. As this dynamic intensifies, we remove our ability to survive and thrive in the internal areas of land masses.

Potential Responses

Several significant issues are raised by this. If we accept the premise that – though further research is needed – the biotic pump theory maybe even partly true, we must move towards radical collaboration across borders and continents to protect forests and our hydrological cycles. Deforestation of the Amazon is already a

low growing plants filter water while the trees themselves transpire filtered water into the atmosphere as well as releasing purified water into the air. The output of this process is purified water leaving forests in streams and ground water as well as falling as rain.

serious problem, but the desertification of this ecosystem will be a catastrophe of unimaginable proportions. Acting so as to prevent the decline of the dynamics envisaged in the biotic pump theory has little downside and may be civilisation-saving. Steps must be taken to stop further disruption. We cannot wait until we have enough evidence to silence even the vested interests (as occurred when the greenhouse gas effect was seriously proposed in the 1980s).

The action we take in protecting existing forests and allowing deforested areas to regenerate has benefits beyond the theoretical function of producing rain. Protecting the forests would result in the conservation of biodiversity, protection of soil, sequestering carbon and protecting of carbon stores, better air quality and flood. Should this not be enough to move us to act?

Our common home is infinitely complex. Our actions have consequences, deep and lasting impacts, which we can be very slow to recognise or understand. As the climate and biodiversity catastrophe continues to disrupt societies across the world, it is absurd that an argument for caution and respect for our common home still needs to be made in the face of the realistic prospect that deforestation leads to desertification.

Climate change affects the global water cycle (Douvillie et al., 2021). This emerging understanding that trees also play a direct and significant role means that there are multiple human stressors in this life-giving cycle. Pope Francis' vision for 'an Amazon region that can integrate and promote all its inhabitants, enabling them to enjoy "good living"' (Pope Francis, 2020, § 8) takes on new urgency if we include the

possibility of a biotic pump effect in the battle for environmental justice and the care of our common home.

This issue is theoretically troubling as it applies to existing rainforests like the Amazon. But it also summons an alarming question: Are the devastating droughts we are currently seeing, especially in the Horn of Africa, a result not only of the changing climate but also of the deforestation and destruction of ecosystems vital to recycling water within large continents? While environmental scientists, especially silvologists, are directly challenged by the theory of biotic pumps, any person concerned with justice has a stake in this conversation, since some of Earth's most marginalised peoples make their homes in the endangered forests, most likely to be felled in the coming decades. As is often the case, what post-Enlightenment Westerners must discover through cutting-edge science may appear more like common sense to people who live in and tend to these environments. Indigenous communities have long recognised the link between healthy forests and freshwater (Forest and Water Programme Team, 2021). Literally at home in the forests, these dynamics are not abstract questions to ponder as they so often are for those of us who live in environments long since deforested.

Conclusion

The renowned American environmentalist, Bill McKibben, has extensively charted the various campaigns of disinformation, extending over decades, that were orchestrated primarily by the fossil fuel industry to deny the reality of climate breakdown. Citing the environmentalist Alex Steffen, he talks of how denialism has

now been replaced by what we might call 'predatory delay', which is the 'blocking or slowing of needed change, in order to make money off unsustainable, unjust systems in the meantime' (McKibben, 2019, especially Chapter 7). Even when it does not take the form of denial or delay, so much of our response to the environmental crisis is lethargic in a way that accelerates the crisis. We have *waited* for scientific certainty. We have *waited* for political consensus. We have *waited* for the sense that the effects of climate change are sufficiently catastrophic. We wait at our peril.

Biotic pumps theory is worthy of further investigation because it presents devastating prospects for the poorest people in our world. No doubt, further research will sharpen our understanding of the dynamics involved. But it is reasonable to conclude, considering how much we have learned about the complexity of our forests and their interactions with our wider climate, that action now is the wise course. A renewed effort to protect the vibrant forests we still have from further destruction may also be our best protection

against a calamitous reduction in rainfall (Kilvert, 2018).

In the Sermon on the Mount, Jesus uses rainfall as an illustration of God's gracious providence: 'God makes his sun to rise on the evil and on the good, and sends rain on the righteous and the unrighteous' (Mt 5:45). The core of the Christian life involves understanding – not just intellectually but expressed in our practices – that we are responsible for how we receive the gifts God provides. Forests, and the people and animals who live in them, ultimately find their source in the same place the heat of the sun and the falling of the rain does: the sovereign Lord. These gifts are ours to cherish and protect – or to use the apt phrase that comes to us straight from Scripture – to till and keep (Gen. 2:15). The biotic pump hypothesis is one more encouragement for us to live up to this vocation.

Martin Luther is reputed to have said that if he found out that the world was ending tomorrow, he would plant a tree today. If we found out that the deserts were spreading, we ought to do the same.

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Is the Congo Basin now the World's First Lung? Its Service in the Fight Against Climate Change

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Introduction

On 17 January 2019, the Society of Jesus identified its four Universal Apostolic Preferences. These were presented to Pope Francis and confirmed on 6 February 2019.¹ They are now the compass that will guide the apostolic work of Jesuits everywhere for ten years. Our contribution will focus on the call of the fourth preference, "*Caring for our Common House: working, with the depth of the Gospel, for the protection and renewal of God's Creation.*"

This preference echoes the publication by Pope Francis on 18 June 2015 of the encyclical *Laudato si'* that asks the Church to mobilise to save the planet earth, our '*common home*.' In response to this call, since 10 October 2015, the Society of Jesus in Africa has set up the Congo Basin

Ecclesial Network (REBAC).² The network would then be adopted as a program of SECAM³ and is today one of the instruments of the Church of Africa in its fight against climate change and the promotion of Integral Ecology.

1. Why the Congo Basin was Chosen

In his encyclical *Laudato si'*, Pope Francis drew the attention of humanity to this region.

"Those richly biodiverse lungs of our planet which are (...) the Congo basins, (...) We know how important these are for the entire earth and the future of humanity..." (LS § 38)

Interest in the Congo Basin is not unique to the Church. More than ten African states are coordinating their actions through various structures.⁴ However, the Church

¹<https://www.jesuits.global/uap/introduction/>

² www.rebaccongobassin.org (REBAC was created during a seminar organized by the Jesuit Social Apostolate in Africa from October 8 to 10, 2015 in collaboration with Caritas Africa and the Justice and Peace Commission of SECAM).

³ Symposium of the Episcopal Conferences of Africa and Madagascar.

⁴ The Central African Forest Commission (COMIFAC) includes 10 countries (Burundi, Cameroon, Chad, Congo, Gabon, Equatorial Guinea, Central African Republic, Democratic Republic of Congo, Rwanda, Sao Tome and Principe). <https://www.comifac.org/>. The Blue Fund includes 12 countries. (Angola, Burundi, Cameroon, Central African Republic, Republic of Congo, Democratic Republic of Congo, Gabon, Equatorial Guinea, Rwanda,

in Africa has decided to start with six countries⁵ in the heart of the Central African rainforest. The interest of all in the Congo Basin is justified. Among other things, the service it renders in the fight against climate change. According to the Central African Forest Commission (COMIFAC), the forests of the Congo Basin contain, after the Amazon, the second largest mass of dense tropical rainforests. These forests are divided into 530 million hectares of total area and 268 million hectares of forest area. They represent "6% of the world's forest area; 70% of Africa's forest cover; 91% of Africa's dense rainforests."⁶ Moreover, the oxygen produced partly contributes to the quality of air inhaled by the planet's inhabitants.

2. The role of the Congo Basin in the Fight Against Climate Change

A recent study⁷ showed that the Congo Basin Forest had become the planet's first lung because it sequesters more carbon than the forest of the Amazon and Indonesia. Indeed, in 2021, a 55-meter high flow tower⁸ able to quantify the exchange of greenhouse gases between the atmosphere and the forest and calculate the quantity of carbon emitted and sequestered by the forest was built in

Yangambi⁹ in the DRC with the help of several research institutions.¹⁰ According to the first scientific tests made in 2021, this forest sequesters more carbon than other rainforests. Subsequently, the Democratic Republic of Congo (DRC) organised its pre-COP27 meeting of world scientists from 5 to 7 September 2022.¹¹ If the other studies are conclusive, the **forest of the Congo Basin will be recognised as the "first lung" of the planet.**

Another asset of the Congo Forest is its peat bogs. In addition to trees and other plants, the Congo Basin Forest is distinguished from other rainforests by the presence of enormous peat bogs. In fact, in 2017, researchers from the University of Leeds in the UK and the University of Kisangani in DR Congo found that the peatlands of the Congo Basin covered an area five times larger than reported in previous scientific literature. These peatlands cover an area of about 145,000 square kilometres. They extend from western DR Congo (DRC) to the Republic of Congo (Congo), an area equivalent to the size of England. With this size, it would be the largest tropical peatland complex in the world.¹² Researchers estimate that these peatlands store up to 30.6 billion tons of carbon, the equivalent of nearly 20 years of

Chad, Tanzania, Zambia).

<https://www.fondsbleu.africa/en/> .

⁵ Cameroon, Congo, Gabon, Equatorial Guinea, Central African Republic, Democratic Republic of Congo.

⁶ <https://www.comifac.org/etudes-forestieres/statistiques> .

⁷ Professor Baudouin Michel, Rector of the Faculty of the Institute of Agricultural Sciences of Yangambi (<https://www.youtube.com/watch?v=h0o9tHfwLw>).

⁸ https://www.eeas.europa.eu/sites/default/files/poster_congoflux.pdf

⁹ <https://www.congo-biogeochem.com/congoflux;>

www.resynde.com/sites/default/files/7824-CongoFlux-Flyer.pdf

¹⁰ Universities of Ghent, Leuven, Yangambi, Max Planck Institute of Biochemistry, Rensselaer Polytechnic Institute, etc.

¹¹ <https://drcprecop27.medd.gouv.cd/>

¹² Dargie, G, Lewis, S, Lawson, I. et al. Age, extent and carbon storage of the central Congo Basin peatland complex. *Nature* 542, 86–90, 2017.

fossil fuel emissions in the United States. If these are released, they will be an ecological disaster. The recent confirmation of the extent of the peatland complex makes the swamp forests of the Congo Basin one of the most carbon-dense ecosystems on the planet. With the presence of these peatlands, forest carbon stocks in the Congo Basin are estimated at 70 billion tons of carbon. If other sources confirm all these data, they will make the Congo Basin Forest a unique and essential space for global climate stability.¹³

Finally, the Congo Basin Forest regulates rainfall. Most of the rain that falls on the African continent originates in this region. These assets make the Congo Basin Forest a crucial part of the world's climate stability.

3. Commitment to the Fight Against Climate Change

Since its creation, REBAC has included the fight against climate change in its agenda. Its report on mapping pastoral and socio-environmental challenges in the region¹⁴ identified 12 challenges as a focus of its work,¹⁵ including the fight against deforestation. Among the drivers of deforestation, church actors identified industrial logging, mining and oil

activities, using wood for fuel, and itinerant agriculture. According to World Bank studies,¹⁶ continued deforestation in the Congo Basin rainforest will lead to 0.7 degrees increase in temperature in the region by 2050, in addition to the 1.4-degree increase already projected for this timeframe due to global greenhouse gas emissions. Furthermore, the study projects¹⁷ the Congo Basin's population to double between 2000 and 2030. More than 170 million people will need food, energy, housing and employment in the region. Finally, the countries of this region are already exposed to the international market with the contribution of finances in mining, oil and industrial agriculture.

- *Fight against deforestation in urban areas:*

Any visitor to this region notices that the forest cover around the big cities, Kinshasa, Brazzaville, Libreville, Yaoundé, Douala, etc., is disappearing rapidly and causing land erosion. Therefore, one of the activities of our communities focuses on the reforestation of these areas. Another activity proposes alternatives to the use of charcoal and firewood in households. Among these alternatives are manufacturing stoves that consume less coal, training in manufacturing bio-gas, and promoting solar energy. However, the

¹³ Ramsar, Largest Transboundary Ramsar Site in the world established in the Congo River Basin, 21 November 2017.

¹⁴ REBAC, Report of the mapping of pastoral and socio-environmental challenges in the Congo Basin region, Kinshasa, Cepas, Sep 2019, 119 pages.

¹⁵ Pastoral and social environmental challenges of the Church in Africa: 1. Massive deforestation by international timber companies, 2. Land grabbing, 3. Maladjustment of peasant agriculture, 4. Mining (war), 5. Artisanal exploitation of

minerals, 6. Uncontrolled hunting of animals, 7. Loss of biodiversity, 8. Limited access to drinking water, 9. Pollution and threat to aquatic life, 10. Change of seasons and rainfall, 11. Protection of indigenous peoples, 12. Violation of human rights.

¹⁶ World Bank (Carole Megevand), Deforestation dynamics in the Congo Basin. Reconciling Economic Growth and Forest Protection, 2013 International Bank for Reconstruction and Development / The World Bank.

¹⁷ Ibid.

penetration of these technologies remains slow compared to the rate of deforestation.

- *Fight against the increase of the industrial exploitation of wood:*

The Center for the Study of Social Action (CEPAS), in collaboration with REBAC, is currently engaged with the Brazilian Center for Analysis and Planning for Development/Brazil (CEBRAP) and the Center for Transdisciplinary Research and Development/Indonesia (CTSS) in an international study on forest governance coordinated by Chatham House (U.K.).¹⁸ This research examines the impact of international trade on forest exploitation. It aims to support governance and market standards to reduce the illegal use of forest resources. In this context, CEPAS focuses on the DRC's 9 July 2021 decision to lift the moratorium on allocating new logging concessions and its impact on industrial logging in the Congo Basin. This decision opens this area to accelerated deforestation. This issue has given rise to several debates and is now mobilising national and international civil society actors. The Jesuit social centres in Central Africa have taken the lead in the discussion about the impact of this decision on the fight against climate change.¹⁹

- *Fighting the extractive industry:*

¹⁸ <https://www.chathamhouse.org/about-us/our-departments/environment-and-society-programme>.

¹⁹ REBAC, Newsletter of 19 April 2022. "The challenge of forest governance in the DRC, reading the IGF report on the allocation and transfer of forest concessions in the DRC."

²⁰ [a report to the UN Security Council](#)

²¹ "Enough is enough. All new exploration and production of coal, oil, and gas must immediately

It was in 2001 that the links between the extractive industry and the escalation of conflict in the Democratic Republic of Congo (DRC) began to be decisively documented in reports to the U.N. Security Council.²⁰ These reports identified the plundering of mineral resources in the DRC as a structural cause of the continuing conflicts. This situation has now spread to the Central African Republic, Cameroon and Mozambique. Most mining sites that fuel the conflicts are located in the heart of the forests. Their exploitation negatively impacts the forest and biodiversity and causes water pollution. The same is true for fossil fuels. The government of the Democratic Republic of Congo decided on Monday, 18 July 2022, to auction off twenty-seven oil blocks and three gas blocks, some of which are located in protected areas. Tenders for the allocation of rights were launched on 28 July 2022. The gravity of this decision has prompted the Vatican to react.²¹ The Episcopal Conference of the DRC and other national and international organisations continue to denounce these decisions that go against the country's commitments in the fight against climate change.

4. Common Agenda for COP27

The above topics will be among the issues that REBAC will bring to the attention of COP27. Like at COP26, REBAC will join

end,... and existing production of fossil fuels must be urgently phased out. (...) The proposed Fossil Fuel Nonproliferation Treaty holds great promise to complement and enhance the Paris Agreement." Press Conference at the Vatican for the presentation of the Message of the Holy Father Pope Francis on the occasion of the World Day of Prayer for the Care of Creation (1 September 2022,) 21.07.2022.

forces with the Ecclesial Network Alliance (ENA) members to mutualise efforts to combat climate change globally. Our activities in the framework of the pre-COP27 are already underway. From 21 to 26 June, in collaboration with the Laudato si' Movement, REBAC took a stand in Nairobi at COP15 on biodiversity.²² *"In recent years, investors from all over the world have focused on the exploitation of Africa's natural wealth, often to the detriment of local communities and the environment. The scale of exploitation has resulted in the loss of vital ecosystems. International agricultural developers on an industrial scale have helped fuel large-scale deforestation and triggered social conflicts."*²³

Currently and in anticipation of COP27 within the steering committee of the African Climate Dialogue (ACD),²⁴ the first activity organised on 19 July 2022 focused on the Congo Basin Forest and its crucial role in the fight against climate change.²⁵

In the run-up to COP27, the objective was to reflect on how to unmask and denounce the forms of false climate solutions in the global climate discourse, in general, and in the Congo Basin and Africa, in particular.²⁶

In reality, most of the proposed solutions to the current climate crisis do not meet the objective of keeping global temperatures at

1.5°C and do not benefit local communities. Moreover, many of the solutions promoted by Western elites to address climate change are often drivers of human rights violations because they are often based on market and liberal economic ideas.²⁷

Conclusion

At the heart of the commitment to integral ecology in the Congo Basin is the fight against poverty. In the fight against climate change, countries face the challenge of the dominant development model. The challenge is to reconcile economic development and conservation of forests, to reconcile the need for energy and the damage due to oil exploitation and the construction of large electric dams. In November 2022, at Sharm El Sheikh, Congo Basin's civil society will denounce projects that damage the environment. Some examples are the Total company's oil exploitation in Lake Albert,²⁸ the SOCO company's contract²⁹ for oil exploitation in the natural reserve of the Virunga Park, and the auction of the oil blocks in the DRC.

REBAC will demand that fight against climate change consider the battle against the galloping poverty of the populations of this region, part of the solution of which

²² <https://www.cbd.int/conferences/post2020>

²³ REBAC, Newsletter of 23 June 23 2022, "SECAM calls for urgent action to establish an ambitious post-2020 global framework for biodiversity."

²⁴ <https://www.cidse.org/2022/07/19/press-release-african-climate-dialogues/>

²⁵ The DAC has planned to organize before the next COP 27 in Egypt five dialogues on climate: a) False Solutions and the Congo Basin – 19 July, b) Food systems, agriculture and adaptation – 10 August, c) Climate Finance – 31 August, d) Loss and damage – 8

September, e) Migration & Displacement – 15 September

²⁶ REBAC, Newsletter Fri. 22 July, Climate Dialogue.

²⁷ Ibid.

²⁸ https://www.lemonde.fr/afrique/article/2021/11/26/projet-d-exploitation-petroliere-en-ouganda-silence-sur-l-or-noir_6103639_3212.html .

²⁹ <https://www.justicepaix.be/l-exploitation-du-petrole-dans-le-parc-des-virunga-menace-ou-opportunité-de/>

lies in the implementation of Articles 6, 7, 9³⁰ and 10 of the Paris Agreement relating to the financing and transfer of technology.

*Original in French
Translated by Fr Hurd*

³⁰ "Developed country Parties shall provide financial resources to assist developing country Parties for both mitigation and

adaptation in continuation of their obligations under the Convention" art.9.



Eco-Spiritual Values behind the Management of Forests and their Conservation: The Case of Congo Basin

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Introduction

Caring for the poor has been the frontline mission of the Catholic Church. Past efforts to bridge a growing divide between the poor and the rich, the Church has stood as a unifying factor through encyclical letters that seek to point out salient issues affecting the poor. The Church has the great mission of spreading the gospel, but along its spiritual journey, it has never neglected the plight of the poor. The eco-justice and eco-spirituality exemplify the Church's commitment to unifying the disconnect between man and nature. While the former denotes the making of an environment to serve the needs of the poor, the latter demonstrates the inextricable connectedness between humanity and nature. Given the Church's role in championing socio-economic development worldwide, the Church's potential to ignite societal transformation for environmental sustainability and awareness cannot be slighted. Church's participation in environmental efforts should be viewed from the lens that it benefits all creation, not just humans.

The Church is a beacon of hope and a solution to the consumerist and capitalist economy. Eco-spirituality thus points out

consciousness and experience that brings a physical-spiritual interconnection between humans and ecology. The Church's emphasis on the plight of the poor caused by climate change is a hallmark of liberation ethics. The poor deserve liberation from the power-submission matrix between the haves and have-nots, where the have-nots are excluded from resource access and ownership. Justice to the poor connotes justice in all its forms - communicative, distributive, restorative, procedural, participative, and social. It considers the prosperity of the entire community, and liberation directly allows persons involved to participate in self-fulfilment. Appoloni (2018) observes that Pope Francis, in his encyclical *Laudato Si'*, calls for justice for the poor by embracing an integral ecology. This encyclical elaborated on the relationship between diminished natural ecosystems and continued suffering among the poor. It calls for reconsidering the aggressive manner in which contemporary society exploits natural resources while driving the poor to further abject poverty. Cano (2019) echoes the need for a paradigm shift from an exploitative economy grounded in a capitalist regime to a cooperative economy that considers austerity. Austerity detests consumption and

accumulation. Instead, it creates a moderation of consumption that puts responsibilities on each of us. Again, moderation seeks to impute individual faults considering the social and ecological effects involved in the accumulation process

The world finds itself in a precarious situation that calls the attention of the religious, scientific, and political spheres. Human activity through its industrial way of life can be indicted for the present-day crisis. The Earth system scientists observe that anthropogenic pressures on the earth system are a disaster in waiting since by exceeding planetary limits, the safety of the Earth's system functioning is jeopardised (Appolloni, 2019). In support, scientists believe that further pressure on the Earth's system can trigger irreversible environmental changes, thus threatening human survival. Even at the heart of the ecological crisis, poverty has remained endemic in most parts of the developing world. Failure to access basics such as water, health, education, and sanitation defines the lives of nearly a billion people worldwide. Still, in the communities where poverty still bites, women and youths are deprived of resource ownership, further increasing their vulnerability. For instance, amidst the extreme drought in Sub-Saharan Africa due to climate change, the patriarchal system of domination puts the responsibility of fetching water and fuelwood for cooking on women. Thus, promoting the doctrine of eco-justice and eco-spirituality puts the Church on the frontline to deliver liberation through the principle of the common good.

Nature speaks to humankind of the beautiful creation presided over by God, the master architect. Very often, a place of

natural beauty denoted by chirping birds, winter and summer tree flowering, weather changes, and harmony instils a mystical feeling. The dependence of humankind, animals, and nature on one another reveals a perfect order fashioned and sustained by the creator (Cano, 2019). The creation story reminds humanity of the great work presided over by the master architect, ensuring everything created connects (Cano, 2019). Within the forest ecosystem exist a perfect coexistence between different species. For communities living within forests, the relationship with animals is a conflict since dependence on the animals for food, medicine, and treasured body parts such as trophies negates the spirit of environmental conservation. Rickenbach et al. (2016), in their study on the wildlife value orientation, find that among the forest dwellers in the Congo Basin, diverse value orientations exist depending on the forest resource dependence. According to the study's findings, human-wildlife conflict is exemplified by the heavy reliance on bushmeat for food leading to an anthropocentric value orientation that approves the killing of wildlife for food. On the contrary, those who do not extensively rely on wildlife have a biocentric attitude where conservation is prioritised.

The Case of Congo Basin

Forest is home to several indigenous communities within the Congo Basin. The Bakwele, Bakota, Sangha-Sangha, Bongouili, Bangombe, Mikaya, Balouma, and the Mbenjele are forest dwellers within the Congo Basin whose livelihoods are dependent on the forest ecosystem provisioning services. Reliance on the forest ecosystem for the daily needs of indigenous communities is quite evident

among the Yaka community, a hunter-gatherer community in Northern Congo (Lewis, 2002). It is a common belief among the Yaka that their God, 'Komba,' created the forest for the community for their sustenance. The community considers forest resources as crucial aspects of their livelihood support. As Hughues (2011) enumerates, forest ecosystem products and services generate income and are fundamental to the subsistence of the local communities for their life support.

Similarly, the Cheam people in Canada, a Coast Salish group occupying the area around Frazer River in Vancouver to the town of Hope, are sustained by the abundance of wildlife, food plants from forests, and fish from the Fraser River (Lewis & Sheppard, 2005). The Cheam people use forests and mountain highlands for spiritual and ritual practices. Further, they consider land a sacred gift from the creator and commit to keeping the connections with forests. It is a command from the Great Spirit for the Cheam community to make productive use of the environment and resources without compromising sustainability. More importantly, the Cheam community believes the resources bestowed on them should benefit them all.

Congo Basin is known for its tropical rainforest, making it critical to the global carbon cycle. However, Congo Basin countries have not been exempted from the impacts of climate change. Subsequently, indigenous communities within the basin have been threatened by their livelihood from forest ecosystem products and services. Since forests are crucial in climate change mitigation, the well-being of the poor, who mostly rely on forest ecosystem services, has dramatically deteriorated.

The tropical forests' vast expanse of the Congo Basin covers several countries, including the Democratic Republic of Congo, Cameroon, Central African Republic, Gabon, Equatorial Guinea, and the Republic of Congo. Of all the countries within the basin, it is estimated that close to 30 million people drawn from 150 different ethnic groups depend on the forest. No significant effort has been undertaken in the countries covered since these indigenous communities are often excluded in national development and fiscal planning. Worse, these communities are exposed to much vulnerability but whose adaptive capacity is least prioritised.

As aforementioned, forests are safety nets meant to cushion the poor from the harsh effects of climate change and are on the verge of collapse. In several ways, forests influence the socio-economic lifestyle of communities within the Congo Basin. For many years, the tropical forests of the Congo Basin have been home to Pygmies who have adopted the lifestyle of non-Pygmies communities over time. As these changes occur among communities depending on the forest ecosystem, conservation efforts meant to curtail the over-exploitation of natural resources derived from the forest are at loggerheads with the livelihood and lifestyle of these indigenous communities. The Pygmies and non-Pygmies communities depending on bushmeat can no longer expressly rely on wildlife inflicting agony on these communities barely captured in the national development plans. When conservation efforts restrict access to some parts of the forest ecosystem products and services, an ethical concern of promoting conservation at the behest of human rights to unhindered access to food arises. There

is a need to balance sustainable exploitation and preserving the forest ecosystem as home to some indigenous communities and for cultural services.

In the spirit of trying to address the plight of the poor for their inability to access natural resources, an environmentalist and 2004 Nobel Prize Laureate, Wangari Maathai, demonstrates a relentless pursuit for the rights of the disenfranchised in natural resource allocation and use (van Klinken, 2015). Maathai's efforts in using religion and spirituality to push environmental advocacy shed light on the Church's capacity to promote ecological thinking. In most of her writings, Maathai depicted the spiritual bond between human beings and nature. Through her critique of Christianity and colonialism, her account reflects African indigenous knowledge of the bond between nature and human beings. She asserts that colonial power and Christian missionaries pledged an attack on the sacred grooves, trees, and sacred landscapes. Further, she adds that desacralising sacred lands ushered in an era of local communities insensitive to environmental destruction.

Interestingly, Maathai uses Christianity and its critique to integrate indigenous traditions' spiritual and cultural values into a modern society that professes Christianity (van Klinken, 2015). Through her book *Replenishing the Earth*, Maathai advocates religious environmentalism by drawing from various traditions to demonstrate the sanctity of nature; her quotation of biblical texts about nature further reinforces the capacity of Christian traditions to inspire the protection of nature. In pushing for environmentalism, spirituality becomes instrumental in inspiring her actions.

The 'Cry of Forest & Air and the Cry of the Poor' is no alarmist initiative. Considering the situation in central Africa, overdependence on wildlife for livelihood has threatened the food security of indigenous communities within the Congo Basin (Doremus, 2019). Rickenbach et al. (2016) have asserted that over 40% of mammal species in Central Africa are unsustainably harvested. This overhunting, they further argue, has been predicted to affect the forest communities by denying them livelihood in the future. Overhunting, if not stemmed, will cause enormous ecological and social consequences that could obliterate the likelihood of supporting communities that rely on forest resources. As aforementioned from the findings of Rickenbach et al. (2016), materialistic consideration for forest ecosystem products and services surpass non-materialistic consideration; thus, biocentric efforts aiming at the sustainability of wildlife and other forest products and services may fail to make an impact. The Church's role in supporting the livelihoods of forest dwellers lies in mitigating the human-wildlife conflict that hinders conservation efforts while seeking to entrench a culture of sustainable resource exploitation.

Given the precarious situation occasioned by conflicts and wars, emergent diseases such as Covid-19, and climate variability and weather shocks, making livelihood resources work for the poor cast the Church in a good picture. The Church's supreme mission to advance religious ethos underscores equality and fairness before God and humans. Religious teachings and responsibilities intend to show us the path to walk in and the ability to determine our course of action without

force. However, many seem not to bother about the ecological crisis, given that the urban lifestyle hides reality from us. A fundamental ethical question would be to review the consumerist culture mostly witnessed in urban settings. Much of the food consumed in cities comes from rural areas and continues, indicating that agricultural activities in rural areas hold the key to the survival of urban dwellers. Constant and Taylor (2020) remark that the value obtained from the forest ecosystem comes in many facets. But for the urban and rural dwellers, regulating services accorded by the forest ecosystem in supporting livelihood come both directly and indirectly.

Preserving the culture of forest dwellers is essential, and it should be a bottom line for us to appreciate the cultural services attached to the forest ecosystem. In many ways, the forest ecosystem connects us to spirituality, cultural heritage, aesthetics, and recreation that appeal differently to people (Constant & Taylor, 2020). It is fair enough and in the spirit of justice to ensure everyone's right is protected. Given the diverse values, living in harmony and peace ought to allow the generation of aesthetic experiences, preservation of culture, and maintenance of religious meaning attached to the forests. Admittedly, the forest ecosystem services can best work for its dependence when efforts for restoring and conserving the forest biodiversity are prioritised at all levels. Concerted efforts involving education on forest ecosystem protection while striking a balance between the provisioning, regulating, and cultural services obtained from the forests can be attempted by the Church. The Church can build partnerships with local communities that rely on the forest ecosystem by

providing facilities for sustainable mechanisms for exploiting the natural resources while maintaining the forest regulating and cultural services. As earlier suggested, the Church's fight for social justice should operate from the point of seeking the participation of local communities.

Conclusion

Recognising the connectedness of humans and nature imbues the spirit of caring, reverence for all life, and justice for all human and natural systems. The disconnect between human activities and the operation of ecosystems only disturbs the natural order leading to dire ramifications for humans and nature. In addressing the pressing issues that emanate from environmental destruction, there is a considerable need to shift from a consumerist exploitative culture to a responsible and environmentally conscious ideology that reconsiders human dominance. In creating reverence and wonder, spirituality provides the option of integrating the realities of nature with the human systems to form an interdependent web of life. Eco-spirituality resulting from such integration is not just about belief, experience, and place but also a call for action to reimagine the social, economic, and political values that consider relationships of elements in the universe as a communion rather than a collection. Lastly, eco-spirituality should imbue us with a sense of oneness and connection with everyone within the web of life. Such oneness and harmony should be life-centred, different from the anthropomorphic perspective that further widens the human-wildlife conflicts, justifying the exploitation of nature at the mercy of humans.

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Saving Cameroon's Forests: Wine for the Rich, Pepper for the Poor

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“Industrial agriculture will take away land from local communities, deprive them of forest-based livelihood services and eventually lead to deeper impoverishment.” - John Takang, Executive Director of the NGO Environmental Governance Institute (EGI)

Introduction

The Congo basin has for centuries provided food, fresh water and shelter to millions of people, including the Bagyeli people, who are hunters and gatherers and whose lives are intimately interlinked with the forest. For a long time, forests have also been acknowledged for their vital role in creating microclimates and improving the quality of the air we breathe. It indicates the close relationship between forests, people, climate and the air that should always be considered in conservation campaigns.

Forests are estimated to capture about 2 billion metric tons of carbon from the atmosphere annually, thereby acting as carbon sinks and decelerating the build-up of carbon dioxide gas (CO₂) in the atmosphere, which is one of the most harmful greenhouse gases (Melillo, 2021). However, in as much as forests are a solution to climate change, they too are affected by climate change. An increase in heat and drought due to climate change, for example, has interfered with the Congo

basin's ability to fight climate change as the growth of individual trees in the forest has been stifled and their ability to absorb carbon reduced (Yeung, 2021). Forests also significantly impact the quality of the air we breathe. Besides the widely-emphasized role of supplying the world's oxygen while filtering out carbon dioxide, forests are also important in particulate matter capture, thus highly critical in maintaining air quality. Additionally, they act as sinks for harmful pollutants that cause respiratory problems from frequent exposure. One such gas is ozone which at ground level, has been linked with asthma.

Sadly, forests around the world are getting smaller and smaller. At the same time, air quality keeps worsening, particularly in developing countries that are working on getting industrialized and catching up with the rest of the developed world. However, in doing so, a lot of air pollution has interfered negatively with air quality in these regions. The loss of primary forests in the Congo basin, the second largest tropical forest in the world, is an issue of concern

that needs urgent addressing. The Congo basin covers six countries: Equatorial Guinea, Gabon, the Central African Republic, Cameroon, the Democratic Republic of the Congo, and the Republic of the Congo. It sustains livelihoods by providing food, shelter and medicine to forest communities. It is also a vital biodiversity area containing some of the oldest, densest and most ecologically significant species, hosting 10,000 species of tropical plants and endangered wildlife.

Oil Plantations and the Destruction of Cameroon's Forests

Cameroon is listed as the seventh country with the world's most significant primary forest loss (Ngeunga, 2021). This forest loss is attributed to agricultural expansion in the country's southern region that led to the forest encroachment. Other factors that have also been driving deforestation include logging (both illegal and industrial), charcoal and fuelwood, as well as infrastructural development. However, Cameroon's declassification of Campo Man National Park as a UNESCO World Heritage site gained the most media attention worldwide. It is because the park is home to 20 villages of Bantu people and seven communities of indigenous Bagyeli people, who depend on forest resources for their livelihoods. And this declassification meant that wealthy investors, Camvert palm-oil company, would now be able to exploit 60,000 hectares of forest near the Campo Man National Park (Ngeunga, 2021). The argument is that the investment creates jobs, contributes to food production and maximizes land use; a sweet-bitter lie to exploit the forest resources with little or no care for afforestation.

However, the sad truth is the losses outweigh the gains because, as a result of the declassification, the Bagyeli and the villages of the Bantu people were robbed of forest resources as large tracts of land were cleared to enable the company to plant oil palm. The oil palm plantation has been the most severe assault on the rights of the Bagyeli and Bantu people. The forest land grabbing was done without prior consultations with the Bagyeli and Bantu people, who were later offered perishable gifts such as canned foods, rice, and soap in exchange for the forest. It is not only unsustainable but also unfair, unjust and unethical. For the Bagyeli and Bantu people, the forest is not just a forest but their home, hospital, and source of food. The value of the forest to these communities cannot be quantified through such material gifts, and attempting to do so is undervaluing the forests and human life. This grand corruption only benefits the wealthy while abusing the poor and minorities. Consequently, communities that could sustain their livelihoods through the forest will now be left without a means to do so.

Besides, the risk of increased human-wildlife conflict due to tampering with the wildlife migration routes will further aggravate the suffering of the Bagyeli and Bantu people. Bantu villages are already complaining of the damage done to their crops by foraging elephants due to clearing part of the forest to make room for the oil plantations. It is worth mentioning that there is also a risk of losing wildlife endemic to the forest conditions due to this course of action. If no action is taken soon, there will be an even greater significant loss in Cameroon's forest area resulting in a reduction of the Congo basin. The repercussions of this are enormous,

especially when considering the contribution of the Congo basin in soaking up the world's carbon dioxide and its resilience in the climate change fight. It would be a big blow to Cameroon and the world. There is also an impending doom of increased pollution and reduced air quality due to the release of stored carbon dioxide due to the massive felling of trees in the forest.

Lost Cameroon's Forests: The Repercussions

Accelerated climate change has been the wrath of mother nature due to the destruction of its precious forests. Cameroon is suffering the most from the effects of climate change, and it expects better and more concrete actions to combat it. Such a country should be at the forefront of developing policies to fight climate change, enforcing government laws and making environmentally sustainable decisions. However, it is the opposite as it destroys its forests in the pretence of agricultural and economic development. It is no wonder that in the Sahel region (part of Northern Cameroon), temperatures are rising 1.5 times faster than the global average, with most farmland being degraded (Ngargoune, 2021). Climate change has not only led to violence in the Northern part of Cameroon but has also caused the mass displacement of thousands of people due to their homes being burned down. The fight has caused family breakups. Children have lost their fathers and mothers, fathers and mothers have lost their children, wives have lost their husbands, and husbands have lost their wives. Most displaced people have been women and children who fled their homes due to insecurity. In addition, as a result of the fight, farmers have not been

able to cultivate their crops, leading to the loss of a lot of the harvest. The reason for this conflict is the fight over dwindling water resources. While it may be stated that Northern Cameroon is not part of the Congo basin, it would be ignorant to assume that deforestation in Cameroon's forests has no impact on the situation. Unfortunately, climate change is not limited by borders. One country's or part of a country's actions or inaction can affect another country or another region of a nation.

Cameroon, being a developing country, has a moderate air pollution level. However, suppose adequate measures are not taken, such as in the transport sector, industrial sector and waste management, there is a high risk of air pollution levels moving to unhealthy levels. It will overburden the dwindling forests in filtering out harmful pollutants and affect the integrity of the forests in carrying out their functions. It will result in more people getting respiratory diseases due to poor air quality. Once again, the poor, minorities, women and children will be the worst affected. Bagyeli and Bantu people, who have already been robbed of their ancestral inheritance of land and forest, will now be smothered with poor air quality. Because they lack financial muscle, they may be unable to shield themselves from this.

Challenging the Status quo

The interconnectedness of the climate, forests and air means that countries need to take an active role in safeguarding the environment and protecting marginalized communities through the policies and legislation that it makes. It requires massive efforts and cooperation from as many agencies as possible. As the saying

goes, it's easier uprooting a plant while its roots are still shallow than when it becomes a massive tree; with its more profound and robust roots, it will require specialized equipment. If we wait too long for the forests to be protected in Cameroon or the Congo basin, we may risk the impossibility of reversing deforestation and its effects on all of us. The poor cry

because of the ill effects of climate change on their lives and livelihoods. The forest cries to be preserved and protected. And the cry of the air is to be free from the pollutants that often bring its quality down. Forests are at the core of our survival; if we do not take drastic measures to halt their destruction, we risk losing it all along with our lives!

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Kenya's Mangroves: Have We Forgotten How to be Good Guests?

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*"We have forgotten how to be good guests, how to walk lightly on the earth as its other creatures do" -
Barbara Ward*

Why Mangrove Forests?

Mangrove forests are essential ecosystems that not only shelter coastal shorelines from erosion and provide a buffer against storm surges but also sustain fisheries by serving as fish breeding grounds. They are also the habitat for various marine organisms such as birds, amphibians, fish, insects, molluscs, sponges, oysters, crabs, shrimps, and worms. However, the most critical role that mangrove forests play, which has driven a lot of campaigns aimed at their conservation, is their role in fighting climate change. Mangroves are the most efficient carbon sinks globally, absorbing around four times more carbon than terrestrial forests (Barnes, 2022).

In Kenya, mangrove forests cover over 60,000 hectares (Prosperi *et al.*, 2021). However, these forests are currently under threat of over-exploitation for wood products, land conversion, and pollution, which has resulted in the degradation of more than 40 per cent of the total mangrove area (Nature Conservancy, 2021). The

degradation of our mangrove forests has its genesis in consumerism. As a result of the growing population, there is an increasing demand for housing along the Kenyan coast. Mangroves are exploited for their wood, usually preferred because it is a cheap, strong and durable building material. Hence, mangroves are over-exploited as the demand for their wood increases. This has caused a ripple effect on crab populations in mangrove-degraded areas as larger crabs have started disappearing (Nature Conservancy, 2021).

In a bid to reduce the pressure on mangrove forests, as a result of consumerism, locals are often engaged in conservation efforts. Many education and awareness campaigns are underway for locals living near mangrove areas to sensitise them on the importance of mangroves and bring them on board to help in their conservation. There have also been initiatives and projects to conserve mangroves through community participation. One such initiative helped put a small village in South Coast Kenya on the map. This village is Gazi, where a

community mangrove restoration project called Mikoko Pamoja, an award-winning Blue Forests initiative, was successfully initiated based on the sale of carbon credits used to fund mangrove conservation alongside development programs in Gazi. However, the involvement of locals in such initiatives is plagued with challenges that threaten to collapse these community conservation initiatives.

The Missing Middle

One challenge has been applying the carbon credit system to other mangrove areas in Kenya. Currently, conservation linked to carbon trading is only present in the mangroves in Gazi and Vanga. The process of registering for carbon trading is usually not easy, and it is a systemised process that requires a level of preparedness for a project to be successful. For instance, to be registered by Plan Vivo, an Offset Project Standard that promotes sustainable development and improves rural livelihoods and ecosystem services, projects must show serious commitments and have the necessary resources. Only then will they be able to be certified and issued with Plan Vivo Certificates that they can sell and use to help fund their operations and bring on new partners.

The Mikoko Project in Gazi is a success story that got the Plan Vivo Certificate that enabled it to participate in carbon trading and earn direct benefits to the locals. However, the costs involved in registering are already too high for locals, who are mostly poor and may need additional funding and partners to apply for the same. Without the ability to trade in carbon, it has become difficult for locals living near other mangrove forests to maintain a long-term engagement in mangrove conservation

because of the low returns. As a result, the mangroves risk being over-exploited because of decreasing conservation efforts.

The unsustainability of conservation efforts is also a challenge faced by community conservation initiatives in Kenya. During the years when the projects get funding, there is a lot of cooperation from community members, and most operations seem to run flawlessly. However, as soon as the funding source ends, it becomes tough to maintain the same zeal for conservation as locals begin abandoning the projects. One of the reasons for this is the low returns on conservation. The resources needed for the conservation of mangroves are costly. Without the necessary funding, most local communities cannot continue their operations, giving locals no option but to abandon. Additionally, most communities living near the mangrove forests are economically disadvantaged. Therefore, when the project stops getting funding, it can also not pay the community how it used to, making the community members de-moralised.

Internal disputes and disagreements within community conservation initiatives also affect their running. A divided house can never stand. Where the leaders within the community conservation initiatives cannot see eye to eye, the enterprise cannot move ahead as fast as it initially intended. For example, the lack of cooperation among the Gazi Women Boardwalk led to the perennial delay in repairing the boardwalk. Consequently, with every passing day of this delay, a lot of revenue is lost that would have significantly benefitted the women in the initiative and acted as an inspiration to other women in

other mangrove areas in Kenya and the world.

Moreover, the level of education among members of most of these community initiatives is also low. Therefore, most are unable to think beyond what they see today. These low literacy levels have made it difficult for these community members to be challenged intellectually on how they can best use mangrove forests sustainably for their benefit. Low education levels also mean that the community must wait for a saviour to rescue them from their problems instead of attempting to tackle them independently. They also become disadvantaged as they rely on outside parties to assist them in looking for and applying for opportunities. For instance, most of these community initiatives require assistance in applying for carbon trading, a process that may delay their certification.

Community conservation initiatives in Kenya are also being affected by illegal poachers, humans who choose to bite the hand that feeds them. Tree-planting exercises are a time and cost-consuming exercise that ought to bear fruit to encourage the community when they see the fruits of their labour. However, when poachers continuously poach re-forested mangroves for good poles, they demoralise the community. They feel it is a waste of time and effort, as their actions do not bear any fruit.

Mangrove destruction from excess sediment deposition is also an issue faced by community conservation initiatives in Kenya. Sedimentation reverses the progress made in the restoration of mangroves. Therefore, all efforts made by the community to restore mangroves go

waste, and the members of the community conservation initiative then begin seeing mangrove conservation as a waste of time and energy.

Marine litter is also an emerging challenge facing community initiatives. These include plastic, rubber, paper, Styrofoam, glass, metals, wood, cloth, and derelict fishing gear or vessels. One of the functions of mangroves is to filter pollutants and trap sediments from land. Unfortunately, this very same function has also made them susceptible to marine litter. Marine litter affects the functionality of mangroves by smothering and displacing propagules, which impedes the process of natural regeneration of the mangrove forest. It also causes the death of species living in that ecosystem and thereby suppresses and pressures the habitat by inhibiting tidal flushing and increasing salinity levels, affecting mangrove growth. Therefore, any progress or milestones achieved by community conservation initiatives is further threatened by marine litter. Additionally, marine litter clean-up in mangrove forests is costly, time-consuming, and requires a lot of effort and workforce. Some areas of the mangrove forests may also be difficult to access and hinder the removal of marine litter.

Local communities with initiatives and desire to conserve the mangrove forests may be relatively fatigued due to resource constraints and minimal short-run returns from conservation efforts, ultimately blinding long-run returns. While appreciating the actions of the local communities, who depended on the mangrove ecosystems for years, to sustain their livelihoods, a call for more education to further expand their knowledge and capabilities is critical. Said or unsaid, the

communities cry for a just and supportive system that enables them to establish sustainable initiatives to conserve the mangroves and reap economic returns for their livelihoods. As such, there is a need to support more community conservation initiatives to successfully register their projects for carbon trading and begin reaping from the conservation of mangroves. It will also enable them to adopt a more futuristic approach to mangrove conservation to ensure that they and their future generations keep on benefitting from mangrove conservation. It is also crucial that these initiatives form constitutions that will govern how they carry out their operations to reduce internal conflicts and disagreements that interfere with the running of the projects.

What Next?

With the dwindling mangrove forests, causative actions point to a combination of

ignorance, greed and need; this calls for collective action. For community conservation initiatives to work, support from the government is crucial. It is not simply by word of mouth alone but by implementing policies and enforcing laws to help reduce poaching and pollution incidents in mangrove forests. It requires active measures inland, such as sustainable waste management based on a circular model to prevent or reduce the occurrence of marine litter and land use management to reduce excess sedimentation that hinders mangrove growth, especially in newly re-forested areas. All said and done, in the concerted efforts to sustainably use environmental resources, let us not forget the silent cry of mangroves and local communities on Kenya's coast. Resonating with Mohith Agadi, 'the environment is no one's property to destroy; it is everyone's responsibility to protect'.

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