**Sollicitudo Rei Socialis 1987, John Paul II**

34. Nor can the moral character of development exclude respect for the beings which constitute the natural world, which the ancient Greeks - alluding precisely to the order which distinguishes it - called the "cosmos." Such realities also demand respect, by virtue of a threefold consideration which it is useful to reflect upon carefully.

The first consideration is the appropriateness of acquiring a growing awareness of the fact that one cannot use with impunity the different categories of beings, whether living or inanimate - animals, plants, the natural elements - simply as one wishes, according to one’s own economic needs. On the contrary, one must take into account the nature of each being and of its mutual connection in an ordered system, which is precisely the cosmos."

The second consideration is based on the realization - which is perhaps more urgent - that natural resources are limited; some are not, as it is said, renewable. Using them as if they were inexhaustible, with absolute dominion, seriously endangers their availability not only for the present generation but above all for generations to come.

The third consideration refers directly to the consequences of a certain type of development on the quality of life in the industrialized zones. We all know that the direct or indirect result of industrialization is, ever more frequently, the pollution of the environment, with serious consequences for the health of the population.

Once again it is evident that development, the planning which governs it, and the way in which resources are used must include respect for moral demands. One of the latter undoubtedly imposes limits on the use of the natural world. The dominion granted to man by the Creator is not an absolute power, nor can one speak of a freedom to "use and misuse," or to dispose of things as one pleases. The limitation imposed from the beginning by the Creator himself and expressed symbolically by the prohibition not to "eat of the fruit of the tree" (cf. Gen 2:16-17) shows clearly enough that, when it comes to the natural world, we are subject not only to biological laws but also to moral ones, which cannot be violated with impunity.

A true concept of development cannot ignore the use of the elements of nature, the renewability of resources and the consequences of haphazard industrialization - three considerations which alert our consciences to the moral dimension of development.[63](https://w2.vatican.va/content/john-paul-ii/en/encyclicals/documents/hf_jp-ii_enc_30121987_sollicitudo-rei-socialis.html" \l "%241R)

**Centesimus Annus, 1991, John Paul II**

37. Equally worrying is *the ecological question*which accompanies the problem of consumerism and which is closely connected to it. In his desire to have and to enjoy rather than to be and to grow, man consumes the resources of the earth and his own life in an excessive and disordered way. At the root of the senseless destruction of the natural environment lies an anthropological error, which unfortunately is widespread in our day. Man, who discovers his capacity to transform and in a certain sense create the world through his own work, forgets that this is always based on God's prior and original gift of the things that are. Man thinks that he can make arbitrary use of the earth, subjecting it without restraint to his will, as though it did not have its own requisites and a prior God-given purpose, which man can indeed develop but must not betray. Instead of carrying out his role as a co-operator with God in the work of creation, man sets himself up in place of God and thus ends up provoking a rebellion on the part of nature, which is more tyrannized than governed by him.[76](https://w2.vatican.va/content/john-paul-ii/en/encyclicals/documents/hf_jp-ii_enc_01051991_centesimus-annus.html" \l "%2424)

In all this, one notes first the poverty or narrowness of man's outlook, motivated as he is by a desire to possess things rather than to relate them to the truth, and lacking that disinterested, unselfish and aesthetic attitude that is born of wonder in the presence of being and of the beauty which enables one to see in visible things the message of the invisible God who created them. In this regard, humanity today must be conscious of its duties and obligations towards future generations.

38. In addition to the irrational destruction of the natural environment, we must also mention the more serious destruction of the *human environment,*something which is by no means receiving the attention it deserves. Although people are rightly worried — though much less than they should be — about preserving the natural habitats of the various animal species threatened with extinction, because they realize that each of these species makes its particular contribution to the balance of nature in general, too little effort is made to *safeguard the moral conditions for an authentic "human ecology".*Not only has God given the earth to man, who must use it with respect for the original good purpose for which it was given to him, but man too is God's gift to man. He must therefore respect the natural and moral structure with which he has been endowed. In this context, mention should be made of the serious problems of modern urbanization, of the need for urban planning which is concerned with how people are to live, and of the attention which should be given to a "social ecology" of work.

Man receives from God his essential dignity and with it the capacity to transcend every social order so as to move towards truth and goodness. But he is also conditioned by the social structure in which he lives, by the education he has received and by his environment. These elements can either help or hinder his living in accordance with the truth. The decisions which create a human environment can give rise to specific structures of sin which impede the full realization of those who are in any way oppressed by them. To destroy such structures and replace them with more authentic forms of living in community is a task which demands courage and patience.[77](https://w2.vatican.va/content/john-paul-ii/en/encyclicals/documents/hf_jp-ii_enc_01051991_centesimus-annus.html" \l "%2425)

39. The first and fundamental structure for "human ecology" is the family, in which man receives his first formative ideas about truth and goodness, and learns what it means to love and to be loved, and thus what it actually means to be a person. Here we mean the *family founded on marriage,*in which the mutual gift of self by husband and wife creates an environment in which children can be born and develop their potentialities, become aware of their dignity and prepare to face their unique and individual destiny. But it often happens that people are discouraged from creating the proper conditions for human reproduction and are led to consider themselves and their lives as a series of sensations to be experienced rather than as a work to be accomplished. The result is a lack of freedom, which causes a person to reject a commitment to enter into a stable relationship with another person and to bring children into the world, or which leads people to consider children as one of the many "things" which an individual can have or not have, according to taste, and which compete with other possibilities.

It is necessary to go back to seeing the family as the*sanctuary of life.*The family is indeed sacred: it is the place in which life — the gift of God — can be properly welcomed and protected against the many attacks to which it is exposed, and can develop in accordance with what constitutes authentic human growth. In the face of the so-called culture of death, the family is the heart of the culture of life.

Human ingenuity seems to be directed more towards limiting, suppressing or destroying the sources of life — including recourse to abortion, which unfortunately is so widespread in the world — than towards defending and opening up the possibilities of life. The Encyclical *Sollicitudo rei socialis*denounced systematic anti-childbearing campaigns which, on the basis of a distorted view of the demographic problem and in a climate of "absolute lack of respect for the freedom of choice of the parties involved", often subject them "to intolerable pressures ... in order to force them to submit to this new form of oppression".[78](https://w2.vatican.va/content/john-paul-ii/en/encyclicals/documents/hf_jp-ii_enc_01051991_centesimus-annus.html" \l "%2426) These policies are extending their field of action by the use of new techniques, to the point of poisoning the lives of millions of defenceless human beings, as if in a form of "chemical warfare".

These criticisms are directed not so much against an economic system as against an ethical and cultural system. The economy in fact is only one aspect and one dimension of the whole of human activity. If economic life is absolutized, if the production and consumption of goods become the centre of social life and society's only value, not subject to any other value, the reason is to be found not so much in the economic system itself as in the fact that the entire socio-cultural system, by ignoring the ethical and religious dimension, has been weakened, and ends by limiting itself to the production of goods and services alone.[79](https://w2.vatican.va/content/john-paul-ii/en/encyclicals/documents/hf_jp-ii_enc_01051991_centesimus-annus.html" \l "%2427)

All of this can be summed up by repeating once more that economic freedom is only one element of human freedom. When it becomes autonomous, when man is seen more as a producer or consumer of goods than as a subject who produces and consumes in order to live, then economic freedom loses its necessary relationship to the human person and ends up by alienating and oppressing him.[80](https://w2.vatican.va/content/john-paul-ii/en/encyclicals/documents/hf_jp-ii_enc_01051991_centesimus-annus.html" \l "%2428)

***Caritas in Veritate*, 2009, Pope Benedict XVI**

48. Today the subject of development is also closely related to the duties arising from*our relationship to the natural environment*. The environment is God's gift to everyone, and in our use of it we have a responsibility towards the poor, towards future generations and towards humanity as a whole. When nature, including the human being, is viewed as the result of mere chance or evolutionary determinism, our sense of responsibility wanes. In nature, the believer recognizes the wonderful result of God's creative activity, which we may use responsibly to satisfy our legitimate needs, material or otherwise, while respecting the intrinsic balance of creation. If this vision is lost, we end up either considering nature an untouchable taboo or, on the contrary, abusing it. Neither attitude is consonant with the Christian vision of nature as the fruit of God's creation.

*Nature expresses a design of love and truth*. It is prior to us, and it has been given to us by God as the setting for our life. Nature speaks to us of the Creator (cf.Rom 1:20) and his love for humanity. It is destined to be “recapitulated” in Christ at the end of time (cf.Eph1:9-10;Col 1:19-20). Thus it too is a “vocation”[[115]](https://w2.vatican.va/content/benedict-xvi/en/encyclicals/documents/hf_ben-xvi_enc_20090629_caritas-in-veritate.html" \l "_edn115" \o "). Nature is at our disposal not as “a heap of scattered refuse”[[116]](https://w2.vatican.va/content/benedict-xvi/en/encyclicals/documents/hf_ben-xvi_enc_20090629_caritas-in-veritate.html" \l "_edn116" \o "), but as a gift of the Creator who has given it an inbuilt order, enabling man to draw from it the principles needed in order “to till it and keep it” (Gen 2:15). But it should also be stressed that it is contrary to authentic development to view nature as something more important than the human person. This position leads to attitudes of neo-paganism or a new pantheism — human salvation cannot come from nature alone, understood in a purely naturalistic sense. This having been said, it is also necessary to reject the opposite position, which aims at total technical dominion over nature, because the natural environment is more than raw material to be manipulated at our pleasure; it is a wondrous work of the Creator containing a “grammar” which sets forth ends and criteria for its wise use, not its reckless exploitation. Today much harm is done to development precisely as a result of these distorted notions. Reducing nature merely to a collection of contingent data ends up doing violence to the environment and even encouraging activity that fails to respect human nature itself. Our nature, constituted not only by matter but also by spirit, and as such, endowed with transcendent meaning and aspirations, is also normative for culture. Human beings interpret and shape the natural environment through culture, which in turn is given direction by the responsible use of freedom, in accordance with the dictates of the moral law. Consequently, projects for integral human development cannot ignore coming generations, but need to be *marked by* *solidarity and inter-generational justice*, while taking into account a variety of contexts: ecological, juridical, economic, political and cultural[[117]](https://w2.vatican.va/content/benedict-xvi/en/encyclicals/documents/hf_ben-xvi_enc_20090629_caritas-in-veritate.html" \l "_edn117" \o ").

49. Questions linked to the care and preservation of the environment today need to give due consideration to*the energy problem*. The fact that some States, power groups and companies hoard non-renewable energy resources represents a grave obstacle to development in poor countries. Those countries lack the economic means either to gain access to existing sources of non-renewable energy or to finance research into new alternatives. The stockpiling of natural resources, which in many cases are found in the poor countries themselves, gives rise to exploitation and frequent conflicts between and within nations. These conflicts are often fought on the soil of those same countries, with a heavy toll of death, destruction and further decay. The international community has an urgent duty to find institutional means of regulating the exploitation of non-renewable resources, involving poor countries in the process, in order to plan together for the future.

On this front too, there is a*pressing moral need for renewed solidarity*, especially in relationships between developing countries and those that are highly industrialized[[118]](https://w2.vatican.va/content/benedict-xvi/en/encyclicals/documents/hf_ben-xvi_enc_20090629_caritas-in-veritate.html" \l "_edn118" \o "). The technologically advanced societies can and must lower their domestic energy consumption, either through an evolution in manufacturing methods or through greater ecological sensitivity among their citizens. It should be added that at present it is possible to achieve improved energy efficiency while at the same time encouraging research into alternative forms of energy. What is also needed, though, is a worldwide redistribution of energy resources, so that countries lacking those resources can have access to them. The fate of those countries cannot be left in the hands of whoever is first to claim the spoils, or whoever is able to prevail over the rest. Here we are dealing with major issues; if they are to be faced adequately, then everyone must responsibly recognize the impact they will have on future generations, particularly on the many young people in the poorer nations, who “ask to assume their active part in the construction of a better world”[[119]](https://w2.vatican.va/content/benedict-xvi/en/encyclicals/documents/hf_ben-xvi_enc_20090629_caritas-in-veritate.html" \l "_edn119" \o ").

50. This responsibility is a global one, for it is concerned not just with energy but with the whole of creation, which must not be bequeathed to future generations depleted of its resources. Human beings legitimately exercise a*responsible stewardship over nature*, in order to protect it, to enjoy its fruits and to cultivate it in new ways, with the assistance of advanced technologies, so that it can worthily accommodate and feed the world's population. On this earth there is room for everyone: here the entire human family must find the resources to live with dignity, through the help of nature itself — God's gift to his children — and through hard work and creativity. At the same time we must recognize our grave duty to hand the earth on to future generations in such a condition that they too can worthily inhabit it and continue to cultivate it. This means being committed to making joint decisions “after pondering responsibly the road to be taken, decisions aimed at strengthening that*covenant between human beings and the environment*, which should mirror the creative love of God, from whom we come and towards whom we are journeying”[[120]](https://w2.vatican.va/content/benedict-xvi/en/encyclicals/documents/hf_ben-xvi_enc_20090629_caritas-in-veritate.html" \l "_edn120" \o "). Let us hope that the international community and individual governments will succeed in countering harmful ways of treating the environment. It is likewise incumbent upon the competent authorities to make every effort to ensure that the economic and social costs of using up shared environmental resources are recognized with transparency and fully borne by those who incur them, not by other peoples or future generations: the protection of the environment, of resources and of the climate obliges all international leaders to act jointly and to show a readiness to work in good faith, respecting the law and promoting solidarity with the weakest regions of the planet[[121]](https://w2.vatican.va/content/benedict-xvi/en/encyclicals/documents/hf_ben-xvi_enc_20090629_caritas-in-veritate.html" \l "_edn121" \o "). One of the greatest challenges facing the economy is to achieve the most efficient use — not abuse — of natural resources, based on a realization that the notion of “efficiency” is not value-free.

51. *The way humanity treats the environment influences the way it treats itself, and vice versa*. This invites contemporary society to a serious review of its life-style, which, in many parts of the world, is prone to hedonism and consumerism, regardless of their harmful consequences[[122]](https://w2.vatican.va/content/benedict-xvi/en/encyclicals/documents/hf_ben-xvi_enc_20090629_caritas-in-veritate.html" \l "_edn122" \o "). What is needed is an effective shift in mentality which can lead to the adoption of*new life-styles*“in which the quest for truth, beauty, goodness and communion with others for the sake of common growth are the factors which determine consumer choices, savings and investments”[[123]](https://w2.vatican.va/content/benedict-xvi/en/encyclicals/documents/hf_ben-xvi_enc_20090629_caritas-in-veritate.html" \l "_edn123" \o "). Every violation of solidarity and civic friendship harms the environment, just as environmental deterioration in turn upsets relations in society. Nature, especially in our time, is so integrated into the dynamics of society and culture that by now it hardly constitutes an independent variable. Desertification and the decline in productivity in some agricultural areas are also the result of impoverishment and underdevelopment among their inhabitants. When incentives are offered for their economic and cultural development, nature itself is protected. Moreover, how many natural resources are squandered by wars! Peace in and among peoples would also provide greater protection for nature. The hoarding of resources, especially water, can generate serious conflicts among the peoples involved. Peaceful agreement about the use of resources can protect nature and, at the same time, the well-being of the societies concerned.

*The Church has a responsibility towards creation* and she must assert this responsibility in the public sphere. In so doing, she must defend not only earth, water and air as gifts of creation that belong to everyone. She must above all protect mankind from self-destruction. There is need for what might be called a human ecology, correctly understood. The deterioration of nature is in fact closely connected to the culture that shapes human coexistence:*when “human ecology”*[[124]](https://w2.vatican.va/content/benedict-xvi/en/encyclicals/documents/hf_ben-xvi_enc_20090629_caritas-in-veritate.html" \l "_edn124" \o ") *is respected within society, environmental ecology also benefits*. Just as human virtues are interrelated, such that the weakening of one places others at risk, so the ecological system is based on respect for a plan that affects both the health of society and its good relationship with nature.

In order to protect nature, it is not enough to intervene with economic incentives or deterrents; not even an apposite education is sufficient. These are important steps, but *the decisive issue is the overall moral tenor of society*. If there is a lack of respect for the right to life and to a natural death, if human conception, gestation and birth are made artificial, if human embryos are sacrificed to research, the conscience of society ends up losing the concept of human ecology and, along with it, that of environmental ecology. It is contradictory to insist that future generations respect the natural environment when our educational systems and laws do not help them to respect themselves. The book of nature is one and indivisible: it takes in not only the environment but also life, sexuality, marriage, the family, social relations: in a word, integral human development. Our duties towards the environment are linked to our duties towards the human person, considered in himself and in relation to others. It would be wrong to uphold one set of duties while trampling on the other. Herein lies a grave contradiction in our mentality and practice today: one which demeans the person, disrupts the environment and damages society.

52. Truth, and the love which it reveals, cannot be produced: they can only be received as a gift. Their ultimate source is not, and cannot be, mankind, but only God, who is himself Truth and Love. This principle is extremely important for society and for development, since neither can be a purely human product; the vocation to development on the part of individuals and peoples is not based simply on human choice, but is an intrinsic part of a plan that is prior to us and constitutes for all of us a duty to be freely accepted. That which is prior to us and constitutes us — subsistent Love and Truth — shows us what goodness is, and in what our true happiness consists.*It shows us the road to true development*.

**Laudato si’, 2015, Pope Francis**

1. *“LAUDATO SI’, mi’ Signore” – “Praise be to you, my Lord”.* In the words of this beautiful canticle, Saint Francis of Assisi reminds us that our common home is like a sister with whom we share our life and a beautiful mother who opens her arms to embrace us. “Praise be to you, my Lord, through our Sister, Mother Earth, who sustains and governs us, and who produces various fruit with coloured flowers and herbs”.[[1]](https://w2.vatican.va/content/francesco/en/encyclicals/documents/papa-francesco_20150524_enciclica-laudato-si.html" \l "_ftn1" \o ")

2. This sister now cries out to us because of the harm we have inflicted on her by our irresponsible use and abuse of the goods with which God has endowed her. We have come to see ourselves as her lords and masters, entitled to plunder her at will. The violence present in our hearts, wounded by sin, is also reflected in the symptoms of sickness evident in the soil, in the water, in the air and in all forms of life. This is why the earth herself, burdened and laid waste, is among the most abandoned and maltreated of our poor; she “groans in travail” (*Rom*8:22). We have forgotten that we ourselves are dust of the earth (cf. *Gen*2:7); our very bodies are made up of her elements, we breathe her air and we receive life and refreshment from her waters.

….

13. The urgent challenge to protect our common home includes a concern to bring the whole human family together to seek a sustainable and integral development, for we know that things can change. The Creator does not abandon us; he never forsakes his loving plan or repents of having created us. Humanity still has the ability to work together in building our common home. Here I want to recognize, encourage and thank all those striving in countless ways to guarantee the protection of the home which we share. Particular appreciation is owed to those who tirelessly seek to resolve the tragic effects of environmental degradation on the lives of the world’s poorest. Young people demand change. They wonder how anyone can claim to be building a better future without thinking of the environmental crisis and the sufferings of the excluded.

14. I urgently appeal, then, for a new dialogue about how we are shaping the future of our planet. We need a conversation which includes everyone, since the environmental challenge we are undergoing, and its human roots, concern and affect us all. The worldwide ecological movement has already made considerable progress and led to the establishment of numerous organizations committed to raising awareness of these challenges. Regrettably, many efforts to seek concrete solutions to the environmental crisis have proved ineffective, not only because of powerful opposition but also because of a more general lack of interest. Obstructionist attitudes, even on the part of believers, can range from denial of the problem to indifference, nonchalant resignation or blind confidence in technical solutions. We require a new and universal solidarity. As the bishops of Southern Africa have stated: “Everyone’s talents and involvement are needed to redress the damage caused by human abuse of God’s creation”. [[22]](https://w2.vatican.va/content/francesco/en/encyclicals/documents/papa-francesco_20150524_enciclica-laudato-si.html" \l "_ftn22" \o ") All of us can cooperate as instruments of God for the care of creation, each according to his or her own culture, experience, involvements and talents.

….

23. The climate is a common good, belonging to all and meant for all. At the global level, it is a complex system linked to many of the essential conditions for human life. A very solid scientific consensus indicates that we are presently witnessing a disturbing warming of the climatic system. In recent decades this warming has been accompanied by a constant rise in the sea level and, it would appear, by an increase of extreme weather events, even if a scientifically determinable cause cannot be assigned to each particular phenomenon. Humanity is called to recognize the need for changes of lifestyle, production and consumption, in order to combat this warming or at least the human causes which produce or aggravate it. It is true that there are other factors (such as volcanic activity, variations in the earth’s orbit and axis, the solar cycle), yet a number of scientific studies indicate that most global warming in recent decades is due to the great concentration of greenhouse gases (carbon dioxide, methane, nitrogen oxides and others) released mainly as a result of human activity. As these gases build up in the atmosphere, they hamper the escape of heat produced by sunlight at the earth’s surface. The problem is aggravated by a model of development based on the intensive use of fossil fuels, which is at the heart of the worldwide energy system. Another determining factor has been an increase in changed uses of the soil, principally deforestation for agricultural purposes.

…

25. Climate change is a global problem with grave implications: environmental, social, economic, political and for the distribution of goods. It represents one of the principal challenges facing humanity in our day. Its worst impact will probably be felt by developing countries in coming decades. Many of the poor live in areas particularly affected by phenomena related to warming, and their means of subsistence are largely dependent on natural reserves and ecosystemic services such as agriculture, fishing and forestry. They have no other financial activities or resources which can enable them to adapt to climate change or to face natural disasters, and their access to social services and protection is very limited. For example, changes in climate, to which animals and plants cannot adapt, lead them to migrate; this in turn affects the livelihood of the poor, who are then forced to leave their homes, with great uncertainty for their future and that of their children. There has been a tragic rise in the number of migrants seeking to flee from the growing poverty caused by environmental degradation. They are not recognized by international conventions as refugees; they bear the loss of the lives they have left behind, without enjoying any legal protection whatsoever. Sadly, there is widespread indifference to such suffering, which is even now taking place throughout our world. Our lack of response to these tragedies involving our brothers and sisters points to the loss of that sense of responsibility for our fellow men and women upon which all civil society is founded.

26. Many of those who possess more resources and economic or political power seem mostly to be concerned with masking the problems or concealing their symptoms, simply making efforts to reduce some of the negative impacts of climate change. However, many of these symptoms indicate that such effects will continue to worsen if we continue with current models of production and consumption. There is an urgent need to develop policies so that, in the next few years, the emission of carbon dioxide and other highly polluting gases can be drastically reduced, for example, substituting for fossil fuels and developing sources of renewable energy. Worldwide there is minimal access to clean and renewable energy. There is still a need to develop adequate storage technologies. Some countries have made considerable progress, although it is far from constituting a significant proportion. Investments have also been made in means of production and transportation which consume less energy and require fewer raw materials, as well as in methods of construction and renovating buildings which improve their energy efficiency. But these good practices are still far from widespread.

…

101. It would hardly be helpful to describe symptoms without acknowledging the human origins of the ecological crisis. A certain way of understanding human life and activity has gone awry, to the serious detriment of the world around us. Should we not pause and consider this? At this stage, I propose that we focus on the dominant technocratic paradigm and the place of human beings and of human action in the world.

**I. TECHNOLOGY: CREATIVITY AND POWER**

102. Humanity has entered a new era in which our technical prowess has brought us to a crossroads. We are the beneficiaries of two centuries of enormous waves of change: steam engines, railways, the telegraph, electricity, automobiles, aeroplanes, chemical industries, modern medicine, information technology and, more recently, the digital revolution, robotics, biotechnologies and nanotechnologies. It is right to rejoice in these advances and to be excited by the immense possibilities which they continue to open up before us, for “science and technology are wonderful products of a God-given human creativity”.[[81]](https://w2.vatican.va/content/francesco/en/encyclicals/documents/papa-francesco_20150524_enciclica-laudato-si.html" \l "_ftn81" \o ") The modification of nature for useful purposes has distinguished the human family from the beginning; technology itself “expresses the inner tension that impels man gradually to overcome material limitations”.[[82]](https://w2.vatican.va/content/francesco/en/encyclicals/documents/papa-francesco_20150524_enciclica-laudato-si.html" \l "_ftn82" \o ") Technology has remedied countless evils which used to harm and limit human beings. How can we not feel gratitude and appreciation for this progress, especially in the fields of medicine, engineering and communications? How could we not acknowledge the work of many scientists and engineers who have provided alternatives to make development sustainable?

103. Technoscience, when well directed, can produce important means of improving the quality of human life, from useful domestic appliances to great transportation systems, bridges, buildings and public spaces. It can also produce art and enable men and women immersed in the material world to “leap” into the world of beauty. Who can deny the beauty of an aircraft or a skyscraper? Valuable works of art and music now make use of new technologies. So, in the beauty intended by the one who uses new technical instruments and in the contemplation of such beauty, a quantum leap occurs, resulting in a fulfilment which is uniquely human.

104. Yet it must also be recognized that nuclear energy, biotechnology, information technology, knowledge of our DNA, and many other abilities which we have acquired, have given us tremendous power. More precisely, they have given those with the knowledge, and especially the economic resources to use them, an impressive dominance over the whole of humanity and the entire world. Never has humanity had such power over itself, yet nothing ensures that it will be used wisely, particularly when we consider how it is currently being used. We need but think of the nuclear bombs dropped in the middle of the twentieth century, or the array of technology which Nazism, Communism and other totalitarian regimes have employed to kill millions of people, to say nothing of the increasingly deadly arsenal of weapons available for modern warfare. In whose hands does all this power lie, or will it eventually end up? It is extremely risky for a small part of humanity to have it.

105. There is a tendency to believe that every increase in power means “an increase of ‘progress’ itself”, an advance in “security, usefulness, welfare and vigour; …an assimilation of new values into the stream of culture”,[[83]](https://w2.vatican.va/content/francesco/en/encyclicals/documents/papa-francesco_20150524_enciclica-laudato-si.html" \l "_ftn83" \o ") as if reality, goodness and truth automatically flow from technological and economic power as such. The fact is that “contemporary man has not been trained to use power well”,[[84]](https://w2.vatican.va/content/francesco/en/encyclicals/documents/papa-francesco_20150524_enciclica-laudato-si.html" \l "_ftn84" \o ") because our immense technological development has not been accompanied by a development in human responsibility, values and conscience. Each age tends to have only a meagre awareness of its own limitations. It is possible that we do not grasp the gravity of the challenges now before us. “The risk is growing day by day that man will not use his power as he should”; in effect, “power is never considered in terms of the responsibility of choice which is inherent in freedom” since its “only norms are taken from alleged necessity, from either utility or security”.[[85]](https://w2.vatican.va/content/francesco/en/encyclicals/documents/papa-francesco_20150524_enciclica-laudato-si.html" \l "_ftn85" \o ") But human beings are not completely autonomous. Our freedom fades when it is handed over to the blind forces of the unconscious, of immediate needs, of self-interest, and of violence. In this sense, we stand naked and exposed in the face of our ever-increasing power, lacking the wherewithal to control it. We have certain superficial mechanisms, but we cannot claim to have a sound ethics, a culture and spirituality genuinely capable of setting limits and teaching clear-minded self-restraint.

**II. THE GLOBALIZATION OF THE TECHNOCRATIC PARADIGM**

106. The basic problem goes even deeper: it is the way that humanity has taken up technology and its development *according to an undifferentiated and one-dimensional paradigm*. This paradigm exalts the concept of a subject who, using logical and rational procedures, progressively approaches and gains control over an external object. This subject makes every effort to establish the scientific and experimental method, which in itself is already a technique of possession, mastery and transformation. It is as if the subject were to find itself in the presence of something formless, completely open to manipulation. Men and women have constantly intervened in nature, but for a long time this meant being in tune with and respecting the possibilities offered by the things themselves. It was a matter of receiving what nature itself allowed, as if from its own hand. Now, by contrast, we are the ones to lay our hands on things, attempting to extract everything possible from them while frequently ignoring or forgetting the reality in front of us. Human beings and material objects no longer extend a friendly hand to one another; the relationship has become confrontational. This has made it easy to accept the idea of infinite or unlimited growth, which proves so attractive to economists, financiers and experts in technology. It is based on the lie that there is an infinite supply of the earth’s goods, and this leads to the planet being squeezed dry beyond every limit. It is the false notion that “an infinite quantity of energy and resources are available, that it is possible to renew them quickly, and that the negative effects of the exploitation of the natural order can be easily absorbed”.[[86]](https://w2.vatican.va/content/francesco/en/encyclicals/documents/papa-francesco_20150524_enciclica-laudato-si.html" \l "_ftn86" \o ")

107. It can be said that many problems of today’s world stem from the tendency, at times unconscious, to make the method and aims of science and technology an epistemological paradigm which shapes the lives of individuals and the workings of society. The effects of imposing this model on reality as a whole, human and social, are seen in the deterioration of the environment, but this is just one sign of a reductionism which affects every aspect of human and social life. We have to accept that technological products are not neutral, for they create a framework which ends up conditioning lifestyles and shaping social possibilities along the lines dictated by the interests of certain powerful groups. Decisions which may seem purely instrumental are in reality decisions about the kind of society we want to build.

108. The idea of promoting a different cultural paradigm and employing technology as a mere instrument is nowadays inconceivable. The technological paradigm has become so dominant that it would be difficult to do without its resources and even more difficult to utilize them without being dominated by their internal logic. It has become countercultural to choose a lifestyle whose goals are even partly independent of technology, of its costs and its power to globalize and make us all the same. Technology tends to absorb everything into its ironclad logic, and those who are surrounded with technology “know full well that it moves forward in the final analysis neither for profit nor for the well-being of the human race”, that “in the most radical sense of the term power is its motive – a lordship over all”.[[87]](https://w2.vatican.va/content/francesco/en/encyclicals/documents/papa-francesco_20150524_enciclica-laudato-si.html" \l "_ftn87" \o ") As a result, “man seizes hold of the naked elements of both nature and human nature”.[[88]](https://w2.vatican.va/content/francesco/en/encyclicals/documents/papa-francesco_20150524_enciclica-laudato-si.html" \l "_ftn88" \o ") Our capacity to make decisions, a more genuine freedom and the space for each one’s alternative creativity are diminished.

109. The technocratic paradigm also tends to dominate economic and political life. The economy accepts every advance in technology with a view to profit, without concern for its potentially negative impact on human beings. Finance overwhelms the real economy. The lessons of the global financial crisis have not been assimilated, and we are learning all too slowly the lessons of environmental deterioration. Some circles maintain that current economics and technology will solve all environmental problems, and argue, in popular and non-technical terms, that the problems of global hunger and poverty will be resolved simply by market growth. They are less concerned with certain economic theories which today scarcely anybody dares defend, than with their actual operation in the functioning of the economy. They may not affirm such theories with words, but nonetheless support them with their deeds by showing no interest in more balanced levels of production, a better distribution of wealth, concern for the environment and the rights of future generations. Their behaviour shows that for them maximizing profits is enough. Yet by itself the market cannot guarantee integral human development and social inclusion.[[89]](https://w2.vatican.va/content/francesco/en/encyclicals/documents/papa-francesco_20150524_enciclica-laudato-si.html" \l "_ftn89" \o ") At the same time, we have “a sort of ‘superdevelopment’ of a wasteful and consumerist kind which forms an unacceptable contrast with the ongoing situations of dehumanizing deprivation”,[[90]](https://w2.vatican.va/content/francesco/en/encyclicals/documents/papa-francesco_20150524_enciclica-laudato-si.html" \l "_ftn90" \o ") while we are all too slow in developing economic institutions and social initiatives which can give the poor regular access to basic resources. We fail to see the deepest roots of our present failures, which have to do with the direction, goals, meaning and social implications of technological and economic growth.

110. The specialization which belongs to technology makes it difficult to see the larger picture. The fragmentation of knowledge proves helpful for concrete applications, and yet it often leads to a loss of appreciation for the whole, for the relationships between things, and for the broader horizon, which then becomes irrelevant. This very fact makes it hard to find adequate ways of solving the more complex problems of today’s world, particularly those regarding the environment and the poor; these problems cannot be dealt with from a single perspective or from a single set of interests. A science which would offer solutions to the great issues would necessarily have to take into account the data generated by other fields of knowledge, including philosophy and social ethics; but this is a difficult habit to acquire today. Nor are there genuine ethical horizons to which one can appeal. Life gradually becomes a surrender to situations conditioned by technology, itself viewed as the principal key to the meaning of existence. In the concrete situation confronting us, there are a number of symptoms which point to what is wrong, such as environmental degradation, anxiety, a loss of the purpose of life and of community living. Once more we see that “realities are more important than ideas”.[[91]](https://w2.vatican.va/content/francesco/en/encyclicals/documents/papa-francesco_20150524_enciclica-laudato-si.html" \l "_ftn91" \o ")

111. Ecological culture cannot be reduced to a series of urgent and partial responses to the immediate problems of pollution, environmental decay and the depletion of natural resources. There needs to be a distinctive way of looking at things, a way of thinking, policies, an educational programme, a lifestyle and a spirituality which together generate resistance to the assault of the technocratic paradigm. Otherwise, even the best ecological initiatives can find themselves caught up in the same globalized logic. To seek only a technical remedy to each environmental problem which comes up is to separate what is in reality interconnected and to mask the true and deepest problems of the global system.

112. Yet we can once more broaden our vision. We have the freedom needed to limit and direct technology; we can put it at the service of another type of progress, one which is healthier, more human, more social, more integral. Liberation from the dominant technocratic paradigm does in fact happen sometimes, for example, when cooperatives of small producers adopt less polluting means of production, and opt for a non-consumerist model of life, recreation and community. Or when technology is directed primarily to resolving people’s concrete problems, truly helping them live with more dignity and less suffering. Or indeed when the desire to create and contemplate beauty manages to overcome reductionism through a kind of salvation which occurs in beauty and in those who behold it. An authentic humanity, calling for a new synthesis, seems to dwell in the midst of our technological culture, almost unnoticed, like a mist seeping gently beneath a closed door. Will the promise last, in spite of everything, with all that is authentic rising up in stubborn resistance?

113. There is also the fact that people no longer seem to believe in a happy future; they no longer have blind trust in a better tomorrow based on the present state of the world and our technical abilities. There is a growing awareness that scientific and technological progress cannot be equated with the progress of humanity and history, a growing sense that the way to a better future lies elsewhere. This is not to reject the possibilities which technology continues to offer us. But humanity has changed profoundly, and the accumulation of constant novelties exalts a superficiality which pulls us in one direction. It becomes difficult to pause and recover depth in life. If architecture reflects the spirit of an age, our megastructures and drab apartment blocks express the spirit of globalized technology, where a constant flood of new products coexists with a tedious monotony. Let us refuse to resign ourselves to this, and continue to wonder about the purpose and meaning of everything. Otherwise we would simply legitimate the present situation and need new forms of escapism to help us endure the emptiness.

114. All of this shows the urgent need for us to move forward in a bold cultural revolution. Science and technology are not neutral; from the beginning to the end of a process, various intentions and possibilities are in play and can take on distinct shapes. Nobody is suggesting a return to the Stone Age, but we do need to slow down and look at reality in a different way, to appropriate the positive and sustainable progress which has been made, but also to recover the values and the great goals swept away by our unrestrained delusions of grandeur.

…

138. Ecology studies the relationship between living organisms and the environment in which they develop. This necessarily entails reflection and debate about the conditions required for the life and survival of society, and the honesty needed to question certain models of development, production and consumption. It cannot be emphasized enough how everything is interconnected. Time and space are not independent of one another, and not even atoms or subatomic particles can be considered in isolation. Just as the different aspects of the planet – physical, chemical and biological – are interrelated, so too living species are part of a network which we will never fully explore and understand. A good part of our genetic code is shared by many living beings. It follows that the fragmentation of knowledge and the isolation of bits of information can actually become a form of ignorance, unless they are integrated into a broader vision of reality.

139. When we speak of the “environment”, what we really mean is a relationship existing between nature and the society which lives in it. Nature 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. Recognizing the reasons why a given area is polluted requires a study of the workings of society, its economy, its behaviour patterns, and the ways it grasps reality. Given the scale of change, it is no longer possible to find a specific, discrete answer for each part of the problem. It is essential to seek comprehensive solutions which consider the interactions within natural systems themselves and with social systems. We are faced not with two separate crises, one environmental and the other social, but rather with one complex crisis which is 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.

…

141. Economic growth, for its part, tends to produce predictable reactions and a certain standardization with the aim of simplifying procedures and reducing costs. This suggests the need for an “economic ecology” capable of appealing to a broader vision of reality. The protection of the environment is in fact “an integral part of the development process and cannot be considered in isolation from it”.[[114]](https://w2.vatican.va/content/francesco/en/encyclicals/documents/papa-francesco_20150524_enciclica-laudato-si.html" \l "_ftn114" \o ") We urgently need a humanism capable of bringing together the different fields of knowledge, including economics, in the service of a more integral and integrating vision. Today, the analysis of environmental problems cannot be separated from the analysis of human, family, work-related and urban contexts, nor from how individuals relate to themselves, which leads in turn to how they relate to others and to the environment. There is an interrelation between ecosystems and between the various spheres of social interaction, demonstrating yet again that “the whole is greater than the part”.[[115]](https://w2.vatican.va/content/francesco/en/encyclicals/documents/papa-francesco_20150524_enciclica-laudato-si.html" \l "_ftn115" \o ")

142. If everything is related, then the health of a society’s institutions has consequences for the environment and the quality of human life. “Every violation of solidarity and civic friendship harms the environment”.[[116]](https://w2.vatican.va/content/francesco/en/encyclicals/documents/papa-francesco_20150524_enciclica-laudato-si.html" \l "_ftn116" \o ") In this sense, social ecology is necessarily institutional, and gradually extends to the whole of society, from the primary social group, the family, to the wider local, national and international communities. Within each social stratum, and between them, institutions develop to regulate human relationships. Anything which weakens those institutions has negative consequences, such as injustice, violence and loss of freedom. A number of countries have a relatively low level of institutional effectiveness, which results in greater problems for their people while benefiting those who profit from this situation. Whether in the administration of the state, the various levels of civil society, or relationships between individuals themselves, lack of respect for the law is becoming more common. Laws may be well framed yet remain a dead letter. Can we hope, then, that in such cases, legislation and regulations dealing with the environment will really prove effective? We know, for example, that countries which have clear legislation about the protection of forests continue to keep silent as they watch laws repeatedly being broken. Moreover, what takes place in any one area can have a direct or indirect influence on other areas. Thus, for example, drug use in affluent societies creates a continual and growing demand for products imported from poorer regions, where behaviour is corrupted, lives are destroyed, and the environment continues to deteriorate.