greatly welcome the recent encyclical: *Laudato si’ On Care for Our Common Home*. One of the world's great leaders, and a popular one, insists that the human relationship to nature can and ought to involve love and appreciation, gratitude and care. The pope is, in words he almost himself uses, a biocentric holist.

Here is the way he puts it, recalling St. Francis:

Francis helps us to see that an integral ecology calls for openness to categories which transcend the language of mathematics and biology, and take us to the heart of what it is to be human. Just as happens when we fall in love with someone, whenever he would gaze at the sun, the moon or the smallest of animals, he burst into song, drawing all other creatures into his praise. He communed with all creation, even preaching to the flowers, inviting them "to praise the Lord, just as if they were endowed with reason." (11)

It is not enough, however, to think of different species merely as potential "resources" to be exploited, while overlooking the fact that they have value in themselves. Each year sees the disappearance of thousands of plant and animal species which we
will never know, which our children will never see, because they have been lost for ever. The great majority becomes extinct for reasons related to human activity. Because of us, thousands of species will no longer give glory to God by their very existence, nor convey their message to us. We have no such right. (33)

These convictions are set in a monotheist perspective, appropriately for the pope, but he does appeal to an "integral ecology" and to species biodiversity as having a worth of their own, under God, which we have no right to destroy.

We take these systems into account not only to determine how best to use them, but also because they have an intrinsic value independent of their usefulness. Each organism, as a creature of God, is good and admirable in itself; the same is true of the harmonious ensemble of organisms existing in a defined space and functioning as a system. (140)

The pope amply recognizes that humans need natural resources, but he is crystal clear that there are limits to exploiting natural resources, limits set by the intrinsic values of plants and animals. He continues:

If we approach nature and the environment without this openness to awe and wonder, if we no longer speak the language of fraternity and beauty in our relationship with the world, our attitude will be that of masters, consumers, ruthless exploiters, unable to set limits on their immediate needs. By contrast, if we feel intimately united with all that exists, then sobriety and care will well up spontaneously. The poverty and austerity of Saint Francis were no mere veneer of asceticism, but something much more radical: a refusal to turn reality into an object simply to be used and controlled. (11)

We are urged to keep "an openness to awe" and this checks an escalating techno-managerial approach. Such an approach by itself is "unable to set limits" to humanity's demands on nature. He links an underdeveloped environmental ethics with an overdeveloped economy. We don't just need better interventions in wild nature, we also need fewer interventions, and more respect for the complex, beautiful world that God has created and nature has evolved over the eons. We need
more protected areas where the primary focus is on biodiversity preservation rather than economic exploitation (37).

The pope is careful to link human losses to biodiversity losses. In the long view biodiversity, when celebrated in awe and with a good of its own, proves also to bring benefits to us. Here is the way he puts it:

The earth’s resources are also being plundered because of short-sighted approaches to the economy, commerce and production. The loss of forests and woodlands entails the loss of species which may constitute extremely important resources in the future, not only for food but also for curing disease and other uses. Different species contain genes which could be key resources in years ahead for meeting human needs and regulating environmental problems. (32)

Ongoing research should also give us a better understanding of how different creatures relate to one another in making up the larger units which today we term "ecosystems" .... Although we are often not aware of it, we depend on these larger systems for our own existence. We need only recall how ecosystems interact in dispersing carbon dioxide, purifying water, controlling illnesses and epidemics, forming soil, breaking down waste, and in many other ways which we overlook or simply do not know about. Once they become conscious of this, many people realize that we live and act on the basis of a reality which has previously been given to us, which precedes our existence and our abilities. So, when we speak of "sustainable use", consideration must always be given to each ecosystem’s regenerative ability in its different areas and aspects. (140)

The pope’s "integral ecology" returns with his discussion of the importance of all things great and small. As ecologists often put it, little things run the world as much as big things. The natural world is a complex webwork:

It may well disturb us to learn of the extinction of mammals or birds, since they are more visible. But the good functioning of ecosystems also requires fungi, algae, worms, insects, reptiles and an innumerable variety of microorganisms. Some less numerous species, although generally unseen, nonetheless play a critical
role in maintaining the equilibrium of a particular place. . . . Nowadays, intervention in nature has become more and more frequent. As a consequence, serious problems arise, leading to further interventions; human activity becomes ubiquitous, with all the risks which this entails. Often a vicious circle results, as human intervention to resolve a problem further aggravates the situation. For example, many birds and insects which disappear due to synthetic agrotoxins are helpful for agriculture: their disappearance will have to be compensated for by yet other techniques which may well prove harmful.

We must be grateful for the praiseworthy efforts being made by scientists and engineers dedicated to finding solutions to man-made problems. But a sober look at our world shows that the degree of human intervention, often in the service of business interests and consumerism, is actually making our earth less rich and beautiful, ever more limited and grey, even as technological advances and consumer goods continue to abound limitlessly. We seem to think that we can substitute an irreplaceable and irretrievable beauty with something which we have created ourselves. (34)

We can put this pope as one with great doubts about any celebration of our having entered a new geological epoch: the Anthropocene—when global ecosystems are significantly impacted by human activities.

The pope has done his homework in ecology. For instance, he also urges that we set aside conservation corridors linking protected areas (35) and that we recognize the difference between tree plantations and primary forests (39).

The pope is asking for a new worldview, not just improvements in the prevailing systems. The driving cause of our environmental crisis is an economic system out of control, not focused on providing sufficient goods for people to live good lives, but devoted ever more intensive commodifying of nature, in service to ever more consumption. Here is his warning:

Environmental protection cannot be assured solely on the basis of financial calculations of costs and benefits. The environment is one of those goods that cannot be adequately safeguarded or
promoted by market forces. Once more, we need to reject a magical conception of the market, which would suggest that problems can be solved simply by an increase in the profits of companies or individuals. Is it realistic to hope that those who are obsessed with maximizing profits will stop to reflect on the environmental damage which they will leave behind for future generations? Where profits alone count, there can be no thinking about the rhythms of nature, its phases of decay and regeneration, or the complexity of ecosystems which may be gravely upset by human intervention. Moreover, biodiversity is considered at most a deposit of economic resources available for exploitation, with no serious thought for the real value of things, their significance for persons and cultures, or the concerns and needs of the poor. (191)

The pope insists that we must tame modern industrial capitalism; harness the economy in service to higher goals. Otherwise the logic of capitalism, endless development, even sustainable development, will degrade both wild nature and human life alike. Some critics have wondered whether the pope should have more directly addressed population growth, but that was something he could not effectively do in this encyclical. In the future the path is figuring out how less is more: "We need to take up an ancient lesson, found in different religious traditions and also in the Bible. It is the conviction that ‘less is more’" (222).

In any event, if in some cases sustainable development were to involve new forms of growth, in other cases, given the insatiable and irresponsible growth produced over many decades, we need also to think of containing growth by setting some reasonable limits and even retracing our steps before it is too late. We know how unsustainable is the behaviour of those who constantly consume and destroy, while others are not yet able to live in a way worthy of their human dignity. That is why the time has come to accept decreased growth in some parts of the world, in order to provide resources for other places to experience healthy growth. (193)

A path of productive development, which is more creative and better directed, could correct the present disparity between excessive technological investment in consumption and
insufficient investment in resolving urgent problems facing the human family. It could generate sensible and profitable ways of reusing, revamping and recycling, and it could also improve the energy efficiency of cities. Productive diversification offers the fullest possibilities to human ingenuity to create and innovate, while at the same time protecting the environment and creating more sources of employment. Such creativity would be a worthy expression of our most noble human qualities, for we would be striving intelligently, boldly and responsibly to promote a sustainable and equitable development within the context of a broader concept of quality of life. On the other hand, to find ever new ways of despoiling nature, purely for the sake of new consumer items and quick profit, would be, in human terms, less worthy and creative, and more superficial. (192)

For new models of progress to arise, there is a need to change "models of global development." This will entail a responsible reflection on "the meaning of the economy and its goals with an eye to correcting its malfunctions and misapplications." It is not enough to balance, in the medium term, the protection of nature with financial gain, or the preservation of the environment with progress. Halfway measures simply delay the inevitable disaster. Put simply, it is a matter of redefining our notion of progress. 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. (194)

This is an encyclical about environment and, equally, a fundamental socio-economic critique. There is remarkable wisdom here, ancient and contemporary, and many of us who have been saying these things for decades can rejoice in a new and powerful voice for saving the Earth.