



## ***Guide to the Healing Earth* Introduction**

### **Part 1**

## **Environmental Science & Integral Ecology**

**The *HE* Introduction begins with a discussion of awe for the Earth, referencing the ‘overview effect’ experienced by astronauts.**

A repeated theme in *HE* is the human experience of awe in the face of Earth's incredible diversity, intricacy, beauty, and power. Throughout *HE*, you are encouraged to get your student outdoors and into nature. Guided hands-on experiments and experiences in nature are a bedrock dimension for educating students as integral ecologists.



***Laudato Si'* 44: "We were not meant to be inundated by cement, asphalt, glass and metal, and deprived of physical contact with nature."**

This Guide offers suggestions and resources for creating sensory experience activities, but we also encourage you to develop creative activities of your own. If you are an experienced educator in environmental science, think about what activities you have already used that were successful in fostering the experience of awe in nature for your students.

**Following the discussion about awe for the natural world, the *HE* Introduction briefly explains the environmental challenges treated in each of its six chapters.** These six challenges were identified in the **United Nations 2007 Millennium Ecosystem Assessment Report** (MEA). The challenges are: declining biodiversity, natural resource extraction, transition to renewable energy sources, water quantity and quality, the industrial food system, and global climate change.

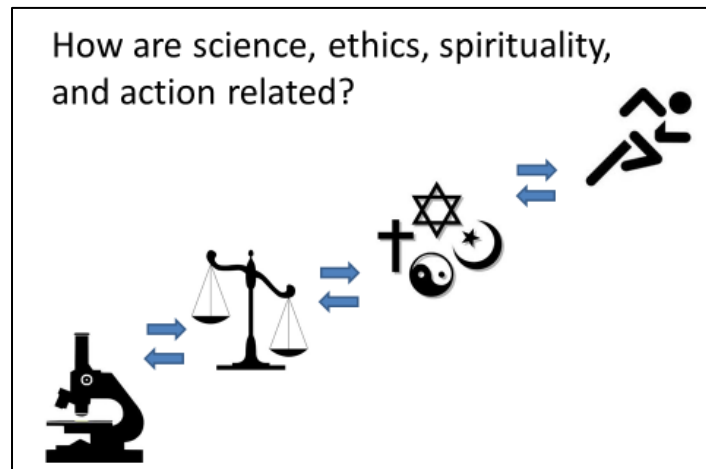
*Laudato Si'* includes a discussion of each of these challenges, particularly in the sections noted here:

- Biodiversity [32-42]
- Natural resources [27]
- Energy [164-165]
- Water [27-31]
- Food [132-134]
- Global climate change [23-25]

Discussing the MEA with your students can help them understand the extent of these ecological challenges.

In 2015, all the member states of the United Nations adopted [The 2030 Agenda for Sustainable Development](#). At the heart of the 2030 agenda are [17 Sustainable Development Goals \(SDGs\)](#). You may wish to discuss these with your students.

**The next topic in *HE's* Introduction addresses the most important feature of the textbook: the *integration* of science, ethics, spirituality, and action.** We recommend that you use this part of the Introduction as the basis for an opening discussion with students about their understanding of science, ethics, spirituality, and action. These topics are discussed more thoroughly in Parts 2-5. For here, you can get the basic idea of integration in HE by studying the following five slides:





**Science** enables us to acquire the **empirical data** we need to address today's environmental challenges,

**BUT** science, by itself, does not tell us what we **should do** in response to these challenges. This next step relies on ethics, where we use moral principles, goals, and virtues to help us make choices that heal the Earth and enhance human life.



**Ethics** enables us to identify our **moral values** so that we can use these values when making choices about what is urgently needed for Earth and human life,

**BUT** ethics, by itself, does not explain why we *care* about moral values. The care and devotion underlying our ethics is the energy of our inner spirit, or **spirituality**--the movements of our heart that are the awe and respect we feel for the natural world and humanity.



**Spirituality** encourages us to discern our **inner spirit** and direct it toward a love of the Earth and humanity, a love that also lies at the center of the great religious traditions of the world,

**BUT** spirituality, by itself, is not the **action** of healing the Earth and enhancing human life.



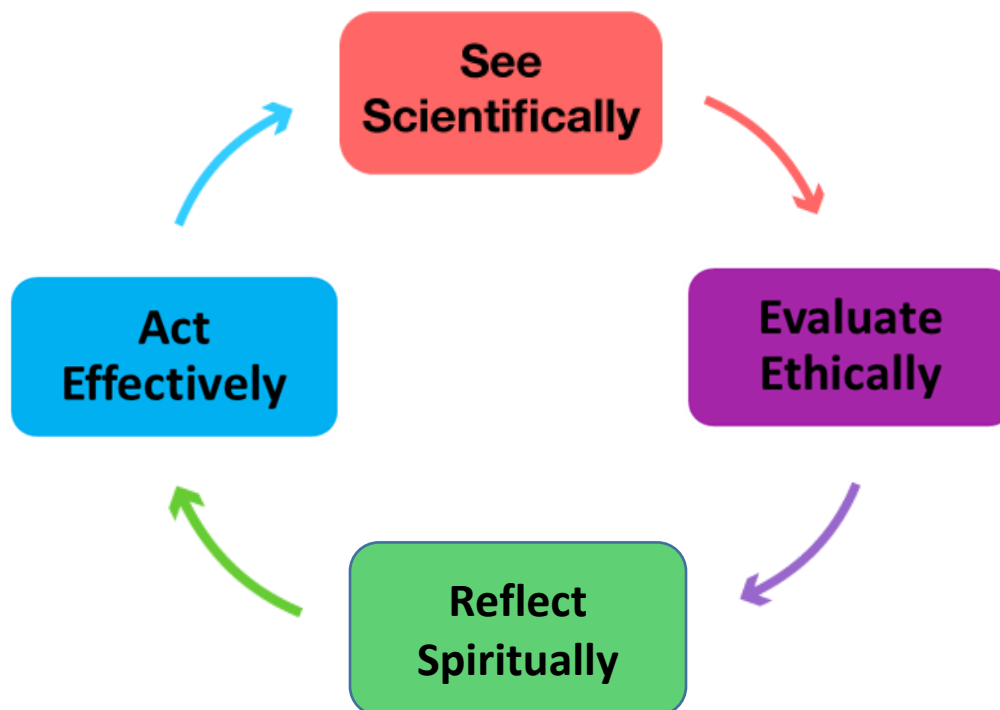
**Action** is how we bring **practice** to the healing of Earth and human life, a practice grounded in spirituality, guided by ethics, and informed by science.

**BUT** once tried, an action needs evaluation, so we return again to *science* and repeat our **integrated method** of environmental science.

**The point emphasized at the end of the last box is very important:** adding ethics, spirituality, and action to the study of environmental science does not encumber science, but *improves it*. Interdisciplinary and multi-dimensional perspectives can catalyze new depth and innovation in science.

***Laudato Si'* 110: "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."**

Some *HE* teachers have used these boxes with their students to begin thinking about integral ecology. You can find Powerpoint slides matching these boxes in this Teacher Guide. Another way to depict the *HE* approach is with this graph:



You may also find it helpful to introduce your students to individuals who exemplify *integral ecology*, such as John Muir, Thomas Berry, or Rachel Carson (noted in the *HE* text with ‘Inspired People’ boxes). These are examples of inspirational figures who brought together science, ethics, spirituality, and action in their lives and their work.

Select Background Resources for This Section

Thomas Berry, *The Sacred Universe: Earth, Spirituality, and Religion in the Twenty-First Century*, Chapter 10, “An Ecologically Sensitive Spirituality”. New York, NY: Columbia University Press, 2009.

Russell A. Butkus and Steven A. Kolmes. *Environmental Science and Theology in Dialogue*. Maryknoll, NY: Orbis, 2011.

David Orr, “Ecological Design and Education,” in *The Sage Handbook of Environment and Society*, Jules Pretty et al. eds. Los Angeles, CA: Sage Publications, 2007.

Carl Safina, *The View from Lazy Point: A Natural Year in an Unnatural World*. New York, NY: Picador, 2011.

Society of Jesus, Social Justice and Ecology Secretariat, *Healing a Broken World: Task Force on Ecology*. *Promotio Iustitiae*, 106, 2011/2.

<http://www.sjweb.info/documents/sis/pjnew/PJ106ENG.pdf>