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## Jesuit Colleges and Universities Uniquely Suited to Tackle the Environmental Crisis

By Nancy Tuchman

**Students feel a sense of urgency** about the global environmental crisis. They are aware of our planet's peril and the great void in worldwide environmental governance. Human use of land and water is driving species to extinction at rates unprecedented in Earth's history. Our global climate is chaotic, and the accelerated pace of warming is expected to make parts of the planet unlivable by 2100. These are the most pressing social issues of the 21<sup>st</sup> century because they threaten the security of land, food, water, and air, the very sustenance of human life. Students are concerned, engaged, and in-

formed; and they want to be agents of change. They are looking for leadership. Spurred by student desires and Pope Francis' call for care of our common home, Jesuit institutions of higher education are uniquely poised and called to deliver.

The challenge with educating young people about environmental degradation is that the more they learn, the more they sense how bleak the outlook is for their future. Balancing exposure to the complexity of the problems with a believable optimism for positive change requires a careful and compassionate teacher. This is where Jesuit universities play an important role: we can integrate *hope* through faith, spirituality, and a call to action that is a hallmark of our institutional missions. In educating undergraduates, the experiences that make the greatest impact are those which integrate student knowledge across disciplines (environmental sciences, economics, politics, international affairs, philosophy, and theology) with the goal of motivating changes in behavior and policy. Sound familiar? It's an approach the Jesuits have used for 470 years, and it works.

In his encyclical "Laudato Si'," Pope Francis calls for humans to be "integral ecologists." What does this mean? He is asking

each of us to think of how our bodies are integrally connected to nature – literally composed of elements from nature – and how our behaviors are directly linked with nature – either facilitating or destroying the very natural elements we require for life. If we integrate care for creation into our behaviors, we will not only experience a positive feedback to our own health, but also to that of the marginalized. This interrelatedness is what the millennials understand. Everything is connected. Every action, decision, and purchase we make has a ripple effect both upstream in the supply chain and downstream in the waste stream.

As a case study, the leadership at Loyola University Chicago (LUC) has made an commitment to developing a culture of integral ecology over the past 14 years, expressed in three concrete ways: (1) Core Curriculum – by converting the core science course into an environmental science course, all students graduating from LUC have a fundamental literacy of environmental challenges; (2) A New Institute – building an interdis-

iplinary Institute of Environmental Sustainability which offers six BA/BS degrees and two minors; it has attracted 260 student majors in three years; and (3) Campus Infrastructure – the campus environmental footprint has been reduced by approximately 50 percent through energy efficient construction, heating/cooling plant upgrades, storm water capture systems, green roofs, and a “Climate Action Plan,” which pledges to make the campus carbon neutral by 2025.

Loyola Chicago’s commitment to these efforts has earned it the ranking of fourth greenest university in the country by the *Sierra Magazine*. What’s more, the commitment to environmental sustainability is identified in surveys by 65 percent of all incoming freshmen as being an *important* or *very important* reason they chose to come to LUC – an indicator of the value millennials place on environmental conscientiousness.

The application of Ignatian pedagogy is particularly relevant in bringing hope and agency to students in times of insecurity and conflict. LUC’s Searle



The Searle Biodiesel Program focuses on production, research, and outreach efforts centered on utilizing waste products to create energy. The products are designed to utilize university and lab waste to make usable products with the long term goal of establishing a Zero Waste Process.



Biodiesel Lab is an example that employs the Ignatian approach by inviting students to work in interdisciplinary teams to develop solutions to environmental problems on campus. The best innovations coming out of a given semester are further developed in subsequent semesters and ultimately scaled up as permanent sustainability features on campus. In this example, our students use the waste vegetable oil from cafeteria deep fat fryers and convert it into biodiesel which replaces petroleum diesel in our campus shuttle buses. It's a waste-to-energy inno-

vation that has measurable reductions in greenhouse gas emissions, waste, and fossil fuel use.

As the project grew, a by-product from the biodiesel reaction, glycerin, began to accumulate in 55 gallon drums in the lab. The students were determined not to send these barrels to the landfill. So they worked with a chemistry professor to make the waste glycerin into soap. Today Loyola BioSoap has been refined through multiple chemistry trials (and lots of lavender essential oils to overcome the lingering French fry odor) and is now sold to

LUC's housekeeping contractor and distributed in restroom hand-soap dispensers across campus. The approach empowers students by engaging them to be agents of change within a definable community (campus) and to contribute measurably to the reduction of campus inputs and waste outputs.

It is both hopeful and exciting to see the creative environmental sustainability programs that Jesuit colleges, universities, and high schools across the country are increasingly facilitating. We can be most effective at this com-



mon goal if we share ideas and work together. Father General Adolfo Nicolás, S.J., challenges us to leverage the capacity of the world's largest higher education network (nearly 175 Jesuit colleges and universities worldwide) to more effectively address environmental and justice issues.

In response to this challenge, one highly collaborative international project led by LUC is the International Jesuit Ecology Project which has produced *Healing Earth*. *Healing Earth* is a free, online textbook in environmental science for college freshmen and high school seniors that integrates ethical

Loyola's University Chicago's Institute of Environmental Sustainability (IES) is engaged in advancing skills and knowledge in sustainable agriculture and developing local food systems through the Urban Agriculture Program. They manage several edible production spaces on Loyola's Lakeshore campus including Winthrop Garden, Mertz Terrace Garden, Quinlan Rooftop Garden, and the Greenhouse Lab featuring two aquaponics systems. In 2014, 1,700 lbs of produce was harvested, with the help of 14 student employees and 300 total student volunteers.

analysis, spiritual reflection, and a call to action. The overall goal of *Healing Earth* is to help all of us become integral ecologists, people who dare to imagine a healed Earth and are willing to put their hands, hearts, and minds to the task. *Healing Earth* was publicly launched in January 2016, after three years of collaborations among 160 Jesuit contributors from 20 countries. The textbook is already being used by 26 professors/teachers in 10 countries. Over 40 more faculty from five additional countries are preparing to use *Healing Earth* in the upcoming semester, and we invite everyone interested to join the *Healing Earth* team of users and builders. This is an exciting example of how, when we combine our efforts, Jesuit institutions around the world are ready to create something that has enormous reach and potential impact (estimated 1,500 students worldwide in 2016 alone).

As an ecologist and a mother, I find hope in the young people. They want to be change agents in the world they are inheriting, and they are looking for adult leadership – someone to not only give them the knowledge and skills

they need to develop into leaders themselves, but also be *models* of faithful stewardship of our fragile Earth. Jesuit institutions around the world have those adult leaders. With the riches of our institutions, the integrity of our common mission, and the time-honored success of our pedagogy, we could be a powerful collaborative force to lead the youth, by example, into a hopeful future.

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(On *Healing Earth* see [www.healingearth.ijep.net](http://www.healingearth.ijep.net). See also "The Jesuit Difference in International Education: Two Projects That Teach a Lot," by Michael J. Schuck of Loyola University Chicago in *Conversations on Jesuit Higher Education* #49, Spring 2016.)

