Sustainable Development
Global Studies Program: Senior Seminar
Spring Quarter 2008
Woodrow W. Clark II, MA³, Ph.D.

INSTRUCTOR
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COURSE: INTL DIV 191, SEMINAR 3: VARIABLE TOPICS IN INTERNATIONAL DEVELOPMENT. SENIOR SEMINAR (4 UNITS)

WEB SITE: http://www.oid.ucla.edu/units/avs/buildings/bunche/bunche3153

CLASS DAYS AND HOURS Wednesdays: Class Time: 1:00-3:50PM

CLASSROOM Bunche Hall, Room #3153

OFFICE HOURS Office: #10382, Bunche Hall, Office Telephone # +1 (310) 825-4488
“Open Door” policy, but best by appointment.
Official Office Hours are after classes from 4-5:30Pm.
Web site: www.clarkstrategicpartners.net

COURSE DESCRIPTION

CONTENT
The “Sequel “ to “An Inconvenient Truth” is sustainable development, which has been defined in many ways over the last few decades since it was first used in the Brundland Report (1987). There are many ways in which organizations interact with the natural environment in order to create a balance between people and our surroundings: economic concerns, business development and employment. The interaction of these sectors and others provide compelling business-minded reasons for pursuing sustainable development. Developing nations are particularly susceptible to pressures for business developing but with little or no concern for the nation’s environment. The need and demands by powerful businesses and political leaders often give way to those concerns for the environment and general population. In this course, we will take a “socially conscious” perspective to environmental issues. That is what sustainable development does: it considers the needs of people in balance with those of the environment. In other words, we will focus on what do and to need to know to stop global warming and climate change.

During this course, basic global environmental issues are reviewed along with key political and societal concerns developing to developed nations. However, the main emphasis will be upon developing nations as global warming and climate change far more heavily impact them. Environmental issues are seen as going beyond global warming, air and water pollution, soil contamination, etc. since they can lead also to new engineering, scientific solutions and technological discoveries that might be seen as “creative destruction” which can turn into new political policies, programs and entrepreneurial ventures. Global problems can turn into creative new ventures. The course will examine current and future political legislation, both in the United States and elsewhere in the world, related to each of these issues. Europe
and Asia provide “learning grounds” for the USA in environmental and energy laws, finance, marketing, operations, management, accounting, entrepreneurship and regional strategy(s). New fields within traditional academic areas will be explored including science, engineering, technology, public policy and international economics. A wide range of popular environmental, energy and scientific literature including books by Cairncross, Diamond, Hawkins, Lovins, Rifkin and others.

A major focus in the class will be on developing nations. Professor Clark has been involved with developing nations and climate issues for over 20 years. His original Ph.D. fieldwork was in Bogotá, Columbia and since then he has focused on Asia such as the Philippines and Peoples Republic of China. Clark has published on environmental and energy issues extensively but the class will focus on his work for the United Nations Intergovernmental Panel on Climate Change (IPCC) and Framework Convention on Climate Change (FCCC).

For the IPCC, Assessment Report #3 (2000) contained the analyses that climate change was causing irrevocable environmental changes. The #4 Assessment Report (2007) took the issues one-step further but stating that mankind was the cause for global warming. In 1997, Clark became the first Director of a Report for the FCCC that concerned the transfer of environmentally sound technologies from developed to developing nations. The Report established the basis for global solutions to climate change. These UN and other NGO reports will be reviewed and discussed.

The recent (December 07) meeting of the UN Commissions in Bali to consider what to do after the Kyoto Accords expire in 2012, resulted in more discussion and goal setting. Meanwhile the USA, which had ranked number #1 in the world as the prime emitter of carbon fell to #2 behind China. But the comparison of carbon parts per million (24 million in the US compared to 4 million in China) compared to the populations of both countries (US at about #50 million people as compared to China with 1.3 billion people (made the US by far the worse offender. So now the issue will be what can China do about its growing economy (8-10% annually over the last decade) and demand for energy.

The class will cover some of these issues. And it will focus with guest speakers and focused readings on what their nations are doing to mitigate global warming. Some of the nations will be representatives from India, Philippines, and the Middle East including Dubai and Armenia. Two Caribbean nations will also be discussed: Jamaica and Cuba. Professor Clark will present some detailed data from his work in Inner Mongolia and others in China. Students will be encouraged to discuss these cases as well as others including South America and Africa.
METHOD
The course consists of a combination of lectures, guest lecturers, cases and discussions of other materials. A group project is a major component of the course. Each group will choose a research question related to the interaction between global policy and the environment.

COURSE OVERVIEW

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<th>SESSION</th>
<th>DATE</th>
<th>TOPIC</th>
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<td>1</td>
<td>April</td>
<td>Introduction: Environmental Policy, Science and Sustainability</td>
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<td>• Administration issues for the course, reading, papers, and grades, etc.</td>
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<td>• Introduction To Public Policy Underlying Environmental Issues</td>
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<td>2</td>
<td>April</td>
<td>Developing Nations: the role of the UN</td>
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<td>• The UN Agencies and Organization: IPCC – Kyoto Accords</td>
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<td>• FCCC and Developing Nations</td>
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<td>April</td>
<td>Asia: India and China</td>
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<td>• The two largest nations – developing sustainably</td>
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<td>• Guest Speaker: Mr Jay Bhalla (Intergy Group) and Steve Done (Arup Group) on Dongtang, China</td>
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<td>4</td>
<td>April</td>
<td>NGOs: the growth and impact in developing nations</td>
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<td>• Focus on Climate Change</td>
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<td>5</td>
<td>May</td>
<td>Sustainable Developing Island Nations</td>
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<td>• Discuss how island nations can become sustainable</td>
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<td>• Guest Speakers: Dr. Ric Singson on Philippines</td>
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<td>Sustainable Business Development</td>
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<td>• “Green” Businesses: what does it mean for businesses to be “green”</td>
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<td>• Cases of Nations, Cities and Regions have declared their goals and unites will be “green”</td>
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<td>• South America with special focus on Costa Rico and Cuba</td>
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<td>7</td>
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<td>Beyond Kyoto: Climate Trading, Social Markets and More</td>
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<td>• Does It Pay To Be Green? How To Incorporate Environmental Performance Into Accounting? Investments and Finance</td>
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<td>• Emissions Trading Markets ↔ The Climate Registry and Exchanges</td>
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<td>• Guest Speaker: Joel Levin, VP, Climate Registry</td>
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<td>Public Policy and Government as Market Drivers</td>
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<td>• Incentives, Finance, Grants From Government Procurement Programs</td>
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<td>• Guest Speakers: Ali Sahabi, “Dos Lagos” ↔ Jamaica and Dubia</td>
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<td>International Sustainable Technologies and Businesses</td>
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<td>• Student Presentations On Volunteer “External Program”</td>
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<td>• Technology cases from developed nations and how they are being transferred to developing nations: Focus on Japan and EU</td>
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<td>10</td>
<td>June</td>
<td>Global Sustainable Development: the Case of Inner Mongolia</td>
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<td>• From Developing to Developed Nation</td>
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<td>• Public Policy and Long Term Five Year Plans</td>
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<td>11</td>
<td>June</td>
<td>Project Presentations</td>
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GRADING

There will be no final exam. The final grade will be determined as follows:

- Class and External Class Participation: 35%
- Group Presentation ("mini-briefing"): 10%
- Assignments: 10% (quiz or assignments)
- Group Project: 45% (report and presentation)

CLASS AND EXTERNAL CLASS PARTICIPATION

This course will be quite heavily discussion-based, as is inevitable given the nature of the topic. As a result, you should be well prepared to participate in these discussions. This means reading the materials for that session, thinking about them and being creative and entrepreneurial in finding and digesting other relevant material from whatever sources you like to use.

Additionally, students will be asked to have a volunteer activity external to the class. It can be part of their group project or separate. However, the activity must be reported upon in class with a short one to two page description or product that is NOT part of the group project turned in at the end of the quarter.

GROUP PRESENTATION (OR "MINI-BRIEFING")

As a way to broaden the scope of the course, most sessions will include a brief presentation by a group of students on a focused topic of their choice. (This is entirely separate from the group projects below, and need not be the same group.) The default for such a presentation would be a short critique of a well-known book in the field (see below for some suggested titles). If you strongly prefer to cover a different topic, for instance a brief discussion of a recent development in the environmental arena (e.g., related to WTO meetings, summit meetings, debates about upcoming local legislation, etc.) or anything else, consult with me first. Check with me whether your book or topic is acceptable before you prepare your presentation. The presentation should be absolutely no more than 10 minutes (i.e., keep it to 2 to 3 slides), plus 5 minutes Q&A. The audience will not be familiar with the book or topic you pick, so make sure to include a short synopsis of the book before discussing and critiquing it.

QUIZ OR ASSIGNMENTS

There will be at least one quiz. Also a short assignment may be given about a topic or research for the class. 20% of the class grade will be based on this area.

GROUP PROJECT

Each group (two to three members) chooses a topic from the list provided in the appendix to work on. If you strongly prefer a different topic, for instance to identify a project with a real company with a real question, that may be acceptable, but check with me first. There is no hard rule on report length; take 20 pages, plus figures, as a rough guideline, but as always quality (insights, structure, breadth) comes before quantity. The last session of the course will be devoted to these project presentations. Note that the workload in sessions 8, 9 and 10 has been kept lower than in the first part of the course to allow more time to finalize your projects. Use it well!

GUIDELINES FOR WRITTEN SUBMISSIONS

Be concise and precise: I look for quality of reasoning and logical consistency, not work based on "stream of consciousness." Use 11 or 12 point font; single spaced. The assignments should be performed entirely individually; you may only discuss your work with others after submitting it. And always cite your sources.
carefully; see for instance [http://www.library.ucla.edu/yr/referenc/plagiarism.htm](http://www.library.ucla.edu/yr/referenc/plagiarism.htm) for detailed guidelines on how to cite correctly, and see [www.deanofstudents.ucla.edu](http://www.deanofstudents.ucla.edu) (click on "students").

### READINGS

All required materials for the course are contained in the course pack, available online through the UCLA library, or will be handed out in class. Note that several of the sessions contain a lot of reading material: make sure you at least skim all of it, and focus more deeply on the articles that interest you most. Each session indicates which readings are required, which are suggested and which are strictly background. You should definitely also explore on your own each of these topics, as new readings appear all the time.

#### REQUIRED READINGS

The course binder, plus the required readings available online; additional materials will be handed out in class. The binder only contains materials for which you do not already have electronic access through the UCLA library.

#### TEXTBOOK


#### SUGGESTED BACKGROUND READINGS

These will not be used in class, but are possible choices to discuss in your group presentation.

- Marc Epstein. Measuring Corporate Environmental Performance.

#### Websites to Visit

- [http://www.innovestgroup.com](http://www.innovestgroup.com)
- [http://www.issproxy.com/index.jsp](http://www.issproxy.com/index.jsp)
- [http://scorecard.org](http://scorecard.org)
Additional Readings

SESSION 1
Introduction to Environmental Policy, Science and Sustainability

**Topic Overview.** This session will serve as an introduction to the course and provide a high-level overview of the science underlying the main environmental issues confronting our planet. The text book, Plan B 2.0 (Lester Brown) will be reviewed. Chapters in the book will be noted for specific classes. The issue and role of public policy will be reviewed both in the US and globally. Specific examples will be given from developing nations.

**Readings**

SESSION 2
Developing Nations: the role of the UN

**Topic Overview.** A review of sustainable issues for developing nations will include global warming and climate change. The United Nations has historically been involved. From the Rio Summit in 1992 through to the UN Conference on Climate Change in Bali (2007), many activities and programs have been implemented. With the Kyoto Accords due to expire in 2012, considerable global concern has been focused on what will and should happen next. A focus on Asia by the UN Economic Social Commission on Asia and the Pacific (UNESCAP) has also resulted in specific strategies for combating global warming and climate change.

**Readings**

*Intergovernmental Panel on Climate Change (IPCC), United Nations*
Environmental Programme (UNEP) and the World Meteorological Organization (WMO) established the IPCC in 1988. Four Reports (Assessments on Climate Change) were given with the last in 2007. [http://www.ipcc.ch/](http://www.ipcc.ch/)

Clark, Woodrow W. II. and RaeKwon Chong (Co-Author/Director) “Technology Transfer of Renewable Energy from Developed to Developing Countries”. Public Funds for technology project. Framework Convention for Climate Change, United Nations, Nov 00. Study of economics of “green” energy in six countries.


SESSION 3

Asia: India and China

Topic Overview.

There are several economic and markets across the world where one can trade carbon (or carbon offsets, CO2 emissions, etc.). Developing nations are being sought to participate in these new economic areas. Some of these are regional, some are national and some are international. Some are connected to legal requirements; others are voluntary. Unsurprisingly, the price, volume, volatility, etc. of each market, varies depending on these factors. Caution must be given to these areas. The focus on India and China are especially significant in that these nations are growing and developing yet need to be sustainable as their energy demands are causing global warming.

Guest Speaker: Mr. Jay Bhalla (integergy Group) will discuss some of the solutions in India from conservation to efficiency including new “local communities power systems”. Mr. Steve Done (Arup Group) will present the community of Dongtang (near Shanghai) in China that is being sustainably developed.
SESSION 4

**NGOs: the growth and impact in developing nations**

**Topic Overview:** Concern about global warming and climate change has meant a strong surge in western technologies being promoted in developing nations. A number of new organizations have been formed to review and consider these and other “solutions” to global warming. For some nations, these groups are primarily “lobbyists” or representatives of a particular industry with a vested interest in the nation. For others, the NGOs are oriented to social issues and concerns.

**Guest Speaker:** To be determined. May try to have a panel or debate about the issues.

SESSION 5

**Sustainable Developing Island Nations**

**Topic Overview.** The concern about global warming and climate change place great pressure on developing nations. The issue is what can they do about it with limited resources. Yet many developing nations are significant contributors to global warming. The issue is what can these nations do to stop and reverse climate change? A large number of developing island nations are considering LNG to Clean Coal Technologies which are purportedly “clean” technologies and hence good for the environment and for their economy. Many island nations, for example, are actively exploring their use of renewable energy resources from the sun and wind for generating power. Their goal is to provide solutions so that they do not have to import fossil fuels. These issues will be explored in detail.

**Guest Speaker:** Dr. Ric Singson (retired CSU, East Bay, School of Business) has worked in his native Philippines for many years. He will talk about the challenges and opportunities for sustainable communities throughout the island nation.

SESSION 6

**Sustainable Balance: Business Development and the Environment**

**Topic Overview.** By 2007, public opinion and decision makers are addressing global warming and climate change. The differences are in how people define the solutions and who is responsible for mitigating these issues. Today, when companies address the problem, they often define the problem in their own corporate best interests and for stock holder quarterly returns as well as executive bonuses. Some companies have “branded” themselves as “green” companies or “eco-friendly”. While these are positive steps toward solving the problems of global pollution, environment degradation and impact of fossil fuels, there needs to be more than public image and new business development. There are companies leading the way and setting examples. Some of these firms are large but most are small that are doing sustainable development projects in South America. There will be special focus on Costa Rico and Cuba as two South American nations with interest and some work in sustainable development. Students will look for these cases and reports on their strategies and results.

**Guest Speaker:** maybe a guest speaker on Cuba or Costa Rico
SESSION 7

Beyond Kyoto: Climate Trading and Social Markets and More

**Topic Overview.** One of the global solutions to climate change has been the idea to create a “market” for credits derived from lowering emissions for energy power and transportation fuel. These credits have various names such as Demand Side Management (DSM), carbon credits and Renewable Energy Credits (RECs). There are voluntary registries in the USA and mandatory ones now in the EU. In order to understand what developing nations are concerned with in trying to reverse their own emissions and pollution, many nations are considering the use of trading their credits and therefore either gaining financial support or off-setting another nation, region, or company from its obligations. The “cap and trade” issue of buying and selling credits will most likely be considered but the new USA President and Congress in 2009 with a direct impact on developing nations.

**Guest Speaker:** Joel Levin, MBA, VP, Climate Registry, Los Angeles, CA which registers companies and communities to establish a base line for them to measure their reduction of carbon from stationary and mobile energy uses. Software systems and then engineering checks allow the companies and communities to record and chart their progress.

SESSION 8

Public Policy and Government as Market Drivers

**Topic Overview.** Green sustainable development programs have primarily been the result of public policy leadership. Nations but particularly cities have taken the lead globally. The issue is can the governments create programs but also support them with funds and incentives. This has been done in Germany and Japan for the last six years. California has also begun similar programs including a solar roofs program. However, the private sector has several examples of concerned business leaders for the environment who are providing models for developing nations.

**Guest Speaker:** Ali Sahabi, SE Corporation, and “Dos Lagos” is a good example of a sustainable community that is now being seen as a model in Dubai and Jamaica among other places in the world.

SESSION 9

International Sustainable Technologies and Businesses

**Topic Overview.** Turning new research discoveries into businesses is always a problematic situation. Today with the interest on environment and climate, more and more scientists, engineers and researchers are turning their attention to commercializing their ideas, intellectual property, patents, designs or publications. The basic issues for the new environmental technologies are much the same for any new venture. More than 70% will fail. In order to avoid a repeat of the “dot.coms” into “dot.bombs”, emerging technologies addressing global warming and climate change can be examined and lessons can be learned from them. Some of the lessons come from outside the US, as with the science parks developed in Europe over the last decade. These technology commercialization models, programs and successes will be explored in detail. One of the current initiatives in California and New York State is to create a “Hydrogen Highway”. Similar projects are underway in the EU and China.

SESSION 10

Global Sustainable Development: Solutions: the case of Inner Mongolia

**Topic Overview.**
One of the best case examples are Japan the EU where many new programs have been put in place to mitigate global warming. But what about developing nations? Inner Mongolia Autonomous Region (IMAR) in the PRC is one of the richest coal producing regions in the world. How does this province develop itself in a sustainable manner including economic and employment while cutting back on emissions from coal and natural gas production? Can renewable energy resources replace both the energy capacity and economic demands of fossil fuels? If so, how can this be done while reducing climate impact from emissions and pollution. Dr. Clark will present his research and finding on Inner Mongolia.

SESSION 11
Project Presentations

Presentation of group projects
EXAMPLES OF GROUP PROJECT TOPICS

1. **Technology Transfer.** How can technologies that are good for the environment be transferred from developed to developing nations. And are there technologies, ideas or mechanisms from developing nations that can be transferred to developed nations? What are the technologies and how can they be made useful and productive.

2. **Developing Countries.** Cases from UN Organizations and groups will be explored such as the IPCC and FCCC along with regional sub-groups such as the UNESCAP (Bangkok) and UNEP (Paris). A review of their work and reports would be both useful and informative as the world community looks to what will happen after the Kyoto Accords end in 2012.

3. **Green Conferences.** One of the complaints among deep-green environmentalists is that there are so many environmentally-themed conferences that themselves add to problems of air and water pollution, water consumption, GHG emissions, climate change, etc. Some organizations attempt to organize conferences with minimal or no environmental impact. Identify these organizations and describe what they do to minimize environmental impacts of a conference, through special travel arrangements, GHG offsets, hotel selection, conference organization, location choice, etc. Quantify the effects, both in economic and environmental terms that greener conferences have had.

4. **UCLA and Sustainability on Campus.** UCLA recently appointed a campus-wide Sustainability Committee. There will be many interesting research questions about sustainability on campus coming out of that committee; you can pick campus-specific questions to work on. The LA Community College District (nine campuses) has a very active and bond-financed program for green buildings. Opportunities for small focused projects exist.

5. **Sustainable Communities.** A series of potential projects exist at local LA Studios as they see the need to be "green" by example, but are also concerned about the environment. However, cost factors must be addressed as the usual "private" business requires more short term return on investment. The challenge is to see how renewable energy can make these facilities cost effective, energy independent and climate neutral. Pilot programs are now underway.

6. **NGOs:** Contact local chapters of NGOs like the NRDC, Global Green, or Heal the Bay.

7. **Other Topics.** To be announced or decided by students in class.
Woodrow W. Clark II, MA³, Ph.D. is Lecturer at the UCLA Anderson School in Sustainable Development and Lecturer, Executive Director of the Alternative Energy Center at Heckmann School for International Entrepreneurship (MBA program) http://heckmann.ucr.edu/ at the University of California, Riverside. He is a “qualitative economist” and has published dozens of peer reviewed articles and a book on the California energy crisis (Agile Energy Systems, 2004) with Professor Ted Bradshaw, University of California, Davis. His latest book, Qualitative Economics: Toward a Science of Economics (with Professor Michael Fast, Aalborg University) is due out in 2008.

Clark was Senior Energy Advisor to Governor Davis and Deputy Director of the Office of Policy and Research (OPR) with a focus on Renewable Energy, Emerging Technologies, Finance and Economic Development. During the 1990s, Clark was Manager of Strategic Planning, Energy Directorate, at Lawrence Livermore National Laboratory and Adjunct Professor, University of California, Davis in Applied Sciences. Due to his work at LLNL and the US Department of Energy, Clark was appointed as co-author and co-editor of two chapters for the IPCC.

After his Fulbright Fellowship (1994) in Entrepreneurship at Aalborg University in Denmark, in 1999 he became a Visiting Professor, International Entrepreneurship, Aalborg University, Denmark. After the recall of Governor Davis, Clark founded Clark Strategic Partners (2005) in Los Angeles, California where clients include the Milken Institute, Senior Fellow for Sustainable Development (http://www.milkeninstitue.org); Energy Director, Los Angeles Community College District (www.laccd.edu) and was Senior Foreign Energy Advisor, Inner Mongolia Autonomous Region (IMAR), Peoples Republic of China (PRC) from 2005-07. He is currently the Sustainable Development Advisor for Paramount Pictures; and Executive Senior Advisor to Green Valley Initiative called GIVE (www.giveforthefuture.org).

Clark is co-founder of Asian Capital Group and an Advisory Board Member of several for-profit organizations such as the Advisory Board for a fuel cell company, Altergy Corp (Folsom, CA) at www.altergy.com. He serves on several non-profit Boards including Net Impact (San Francisco, CA), www.netimpact.org and the Green Coast Foundation, Los Angeles, California http://www.greencoast.org.

He is a member of Transit Cooperative Research Program Panel managed by the National Academy of Sciences and co-chair with Jeremy Rifkin of the “Green Hydrogen Science and Technology Team” in the USA and EU (http://www.foet.org). He teaches internationally and has earned three Masters of Arts degrees in different fields from three different universities with his Ph.D. from the University of California, Berkeley where he was elected to the Alumni Board of Directors (2006-09). Clark has two new books in process: Sustainable Communities and Tools for Sustainable Development both due at the end of 2008.