

**Full Course Title:** Booz Allen Hamilton: Climate Change Adaptation II - Assessing impacts to regions and organizations

**Course Title for Registration System:** Booz Allen Hamilton

**Course Number:** SIPAU9000.043

**Faculty Advisors:** Prof. Shiv Someshwar and Kye Baroang

**Columbia Email Addresses:** [ssomeshwar@ei.columbia.edu](mailto:ssomeshwar@ei.columbia.edu), [kbaroang@ei.columbia.edu](mailto:kbaroang@ei.columbia.edu)

**Meeting Date/s Times:** Wednesdays 2:10P – 4:00P

**Location:** IAB 501

**Office Hours:** Wednesdays (2 pm onwards)

**Credits:** 3

**Prerequisites:** A basic understanding of climate change and sustainable development issues is highly preferable; students will be expected to rapidly engage with material and topics related to climate change adaptation.

**Course Overview:**

**Brief description of client:**

Booz Allen Hamilton has been at the forefront of strategy and technology consulting for more than 90 years. Providing a broad range of services in strategy, operations, organization and change, information technology, systems engineering, and program management. The firm is committed to delivering results that endure. Headquartered in McLean, Virginia, Booz Allen has over 25,000 employees and generates annual revenue of approximately \$5 billion.

This Capstone Workshop will be primarily supported through the Booz Allen Center of Excellence on Climate Change and National Security (CCNS) and a collaborative relationship between Booz Allen's Diplomacy and International Development (DID) practice and the Infrastructure Center of Excellence (COE). The Climate Change and National Security COE acts as a clearinghouse for climate change related activities within the firm. DID exercises thought leadership across the span of activities associated with international development, while the Infrastructure COE provides services that protect and conserve natural resources. **See Annex 1 for additional details on each center/division.**

**Summary of project:**

This Climate Change Adaptation Capstone Workshop is a sequel to the Spring 2011 session, also sponsored by Booz Allen, which was focused upon the Himalayan Sub Basin. It will use the impact assessment framework, developed by the 2011 class, as a starting point, subject to improvements by the 2012 class. This Capstone Workshop will provide students the opportunity to produce original concept papers examining the impacts of climate change on Nigeria/West Africa, with respect to the Niger Delta, and the policy/mission implications for USAID and The World Bank Group, engaged in

sustainable development, creation of local economic opportunities especially for the poor, and better governance. In this context, climate change impacts are the expected positive or negative effects on food security, water security, energy resources, health, and biodiversity (that are the Booz Allen focus areas for climate change adaptation). For this workshop, students are expected to place policy emphasis on any three of the impact areas. **See Annex 2 for an overview of the country/sub-region and the business clients associated with this effort.** In addition to analyzing the potential impacts of climate change on USAID and WBG current strategies and approaches, the students will provide recommendations for changes in organizational policy in order for them to assist developing countries to adequately adapt to climate change.

**Deliverables to client:**

Students will produce four distinct deliverables: a detailed project work plan, a 1-2 page framework document (using the version developed by the Spring 2011 class as a starting point, **separately attached in Annex 3**) which demonstrates how students would evaluate climate change impacts in a given region, a 5-page impact assessment which summarizes climate change impacts in the Niger Delta region using the framework, and a maximum 17-page concept paper, with a 2-page Executive Summary, which evaluates realistic policy propositions for Nigeria and describes how these policy proposals would help or hinder the mission of USAID and WBG abroad. These deliverables will provide Booz Allen with insights to be used in providing advice and counsel to its USAID and WBG clients. **See Annex 4 for the Table of Deliverables.**

Each deliverable will be in document form, with any supporting graphic slides as appropriate, at a quality suitable for publishing on the Columbia/SIPA website *and* for the use of Booz Allen Hamilton and its clients. They will be accompanied by oral presentations and subsequent Q&A sessions, the duration of which will be determined by the Faculty Advisors and Booz Allen Hamilton.

**Special skills/knowledge needed by team members:**

The student team should have the capacity and desire to perform in-depth, primary research, including process and policy review, methodological analysis, comparative model reviews, structured interviewing as appropriate, and reports assessment as necessary.

Booz Allen expects optimal teamwork to prevail amongst the capstone-workshop graduate students, and that the team members will be self-starting and reliant. In this respect, and with the mentoring of the workshop Faculty Advisors, the team is expected to cover the major elements of the project within the work plan definition, which will be broached and reviewed with Booz Allen early in the semester, not later than the 2<sup>nd</sup> class session.

By virtue of this project, focused on climate change impacts and adaptation, team members would be expected to hone their skills and understanding with respect to US, foreign government and trade group legislation and platforms; public policy frameworks and sustainability models; business enabling diagnostics and recommendations; etc. A basic understanding of climate change issues is highly preferable, as students will be expected to rapidly engage with material and topics related to climate change.

By definition, this will be a cross-disciplinary study, requiring facility with multi-modal research, critical analysis, integrative writing, and concise oral presentations. Booz Allen, as a company, values a broad base of staff skill development required to serve the interests of public and private sector clients worldwide.

There are no foreign language proficiencies required for this project. Since the target geographical area will be within the developing world, it would be helpful for the student team members to have developing world exposure and experience, through employment, volunteerism, travel, military service, or family upbringing.

**Interactions with client:**

During the semester, Booz Allen Hamilton staff will work closely with the Faculty Advisors to ensure that students are adequately informed to ensure successful and timely deliverables. To this end, 1-2 Booz Allen Hamilton staff will attend up to 4 classes at SIPA, be available to review draft and final copies of the students' deliverables, and to answer other questions from the students' elected team lead. All queries and clarifications will be routed to BAH staff via a designated student member of the Capstone Workshop team. A 72-hour weekday response time would be the norm for BAH staff.

**Field component:**

Travel outside the New York City metro area is not envisioned. As an exception to this, as was accomplished for previous workshops, a partially funded visit by the students to Washington, DC, may be possible to benefit from briefings, conduct interviews, and engage in dialogues with officials and staff of the USAID, Booz Allen Hamilton, non-governmental organizations (NGOs), the Embassy of Nigeria (schedule permitting), and the WBG (IBRD/IDA and IFC). Correspondingly, and in direct coordination with the Faculty Advisors and SIPA Administration, interviews with officials and staff of institutions focused upon climate change matters are envisioned within the New York City metropolitan area. These are both subject to both schedule and funding availability.

**Student selection:**

[All eligible students may apply for up to five workshops through a special online application process from October 15<sup>th</sup> until October 31<sup>st</sup>. Assignment of students will be coordinated by the Office of Academic Affairs, and relevant faculty will be consulted about team membership for their workshop(s).]

**Grading (students receive an individual grade):**

Grades for the workshop will be based on the following criteria:

- Quality of individual written work (15%)
- Quality of participation in class, Peer review (15%)
- Feedback from the client (20%)
- Overall professionalism, including timeliness, ability to work with team, etc. (20%)
- Quality of team's final report and briefing (30%)

**Readings and other resources:**

Booz Allen Hamilton and the Faculty Advisor will provide the class with a reading list to allow the students to better acquaint themselves with the topic of climate change adaptation. While some key documents and readings may be made available via Courseworks, students will be expected to locate

other resources via the internet and other Columbia information resources.

Booz Allen will likely provide the student team with access to one or more of its team leaders in the field or at its headquarters, working on climate change issues, to gain practical insights on proposed approaches through conference calls. The Faculty Advisors and Booz Allen will determine the timing and frequency of these conference calls. Booz Allen will fund any conference calls, domestic or overseas. Moreover, Booz Allen anticipates that SIPA, through its academic network (e.g., of the Earth Institute) will likely provide the student team with access to relevant research and special study leaders, publications, reference sources, etc..

In addition, it is expected that students utilize interviews with faculty at Columbia, with officials and staff of NYC area institutions focused on climate change matters, and representatives from USAID and/or WBG to gather needed information.

**\*Academic Integrity Statement\*:**

The School of International & Public Affairs does not tolerate cheating and/or plagiarism in any form. Those students who violate the Code of Academic & Professional Conduct will be subject to the Dean's Disciplinary Procedures. Cut and paste the following link into your browser to view the Code of Academic & Professional Conduct online.

[http://sipa.columbia.edu/resources\\_services/student\\_affairs/academic\\_policies/deans\\_discipline\\_policy.html](http://sipa.columbia.edu/resources_services/student_affairs/academic_policies/deans_discipline_policy.html)

Please familiarize yourself with the proper methods of citation and attribution. The School provides some useful resources online; we strongly encourage you to familiarize yourself with these various styles before conducting your research:

[http://sipa.columbia.edu/resources\\_services/student\\_affairs/academic\\_policies/code\\_of\\_conduct.html](http://sipa.columbia.edu/resources_services/student_affairs/academic_policies/code_of_conduct.html)

Violations of the Code of Academic & Professional Conduct should be reported to the Associate Dean for Student Affairs.

**Annex 1: Details on BAH Centers/Divisions**

In recognition of the economic, political, defense and national security implications of climate change, Booz Allen has established a Center of Excellence on Climate Change and National Security (CCNS) dedicated to bringing together diverse firm resources to enable a better understanding of how to support clients in mitigating and adapting to climate change impacts. This team reaches far into the firm to pull from the breadth and depth of our expertise and ensures a collaborative approach, which brings together our talents in environment, energy, intelligence, analytics, policy, commercial strategy, and economics. CCNS's objectives are to define the market, coordinate Booz Allen's approach, and act as a clearinghouse for climate change related projects as the market develops. CCNS serves as an entry point for clients, as an integrator of diverse Booz Allen teams, and as a source of subject matter experts to support clients in the civil, defense and national security space dealing with the complex challenge of climate change. CCNS supports teams such as DID and the Infrastructure COE on climate change related issues.

DID's engagements are focused upon "the international space" and include strategic planning; policy formulation; organizational design; organizational performance management; information strategy, technology, and architecture; change management & organizational transformation; human capital management; and alignment between planning and operations. Projects are associated with mission and implementation support at HQ and field locations (program definition; operation and measurement; partnership management; supply chain management; knowledge management and business collaboration; infrastructure and personnel management; enterprise architecture, data flow design, and information quality; etc.). DID projects typically entail the multidimensional disciplines of public policy/development strategy, information technology/information management, business analytics, and business management/economics. At present, the practice has approximately 300 staff in support of 120 active projects, which are globally placed. Clients include the US Agency for International Development (USAID), Millennium Challenge Corporation (MCC), State Department,

World Bank Group (WBG), International Monetary Fund (IMF), Inter-American Development Bank (IADB), other sovereign governments, and philanthropic foundations.

The Infrastructure COE, within the firm's Engineering & Operations Capability Area, views infrastructures as complex systems integrating people, process, structure, technology, and mechanisms to achieve a specific purpose or objective. The COE has adopted the US Government's definition of the infrastructures deemed critical to a nation's well-being and competitiveness, including health, energy, water, transportation, and related financial resources. Within our integrated Infrastructure business is the Energy, Transportation and Environment (ETE) market, which has a climate change and sustainability component, primarily focused on mitigation. This market currently entails the strategy, planning, and delivery of services to public and private sector clients, which include US DOE Advanced Research Project Agency, USAID, The Carbon Trust, World Economic Forum, European Union, Global Energy Companies (Anonymous), Global Financial Companies (Anonymous), NASA, National Science Foundation, and the US Global Change Research Program. Booz Allen's worldwide infrastructure team consists of over 1,700 specialists, in support of over 800 active projects, with a unique combination of management and technical skills, able to address climate change issues in all relevant technical, planning and management areas. Professional capabilities cross a diverse spectrum of climate-related disciplines: strategic planning, climate science, economic modeling, hydrogeology, and modeling and forecasting.

## **Annex 2: Overview of the country/sub-region and the business clients associated with this effort**

Nigeria has the largest population of Africa (155m), and is the second largest economy. It is a "lower middle income country" with a Gross National Income per capita of USD 1,180 in CY2010 (lower middle income range is USD 1,006 – 3,975). See <http://data.worldbank.org/about/country-classifications>

Nigeria is the 12<sup>th</sup> largest producer of petroleum in the World, with this commodity accounting for approximately 40% of GDP and 80% of government revenue. The Niger Delta is its main oil-producing region.

The Delta covers 20,000 km<sup>2</sup> (part of a larger wetland of 70,000 km<sup>2</sup>). This delta floodplain comprises 7.5% of Nigeria's total land mass, and is home to over 20 million people from 40 different ethnic groups. The Delta contains one of the highest concentrations of biodiversity in the planet.

Some of the key challenges for sustainable development in the Delta include:

- Erosion and flooding
- Land subsidence
- Sea level rise
- Oil spills and natural gas flaring
- Depletion of fish populations
- High developmental pressures on the ecosystem
- Economic development marked by regional inequities
- Conflicts over oil and ecosystem resources
- Deterioration of law and order in the Delta, somewhat mitigated by the outcome of the CY2011 presidential and legislative elections.

Over 80% of Nigeria's development assistance (provided through loans, credits and technical assistance programs) is through a donor partnership of USAID, World Bank Group, the UK DfID (Department for International Development), and AfDB (African Development Bank). This is being accomplished during the FY10-13 period with a focus on three areas: (i) improving governance; (ii) maintaining non-oil growth; and (iii) promoting human development.

USAID provides development aid to Nigeria with an emphasis on strengthening social stability through improved social services, streamlined governance, promotion of a more market-led economy, enhancement of trade/commerce, and improvement of the enabling environment for agriculture and microfinance. In a unique public-private partnership, USAID and Chevron recently created a joint \$US50m four year program for the Niger Delta to design and develop programs oriented to economic development, capacity building, peace-building, and analysis and advocacy. With the various climate change risk factors cited above, exacerbated by socio-economic-political situation, a reevaluation of the USAID's medium-to-long-term overall policy and mission for assistance may be appropriate.

The World Bank's FY10-13 Country Strategy for Nigeria, notes the likely impacts of climate change in the Delta region. In the more sub-humid and semi-arid zones, climate change is expected to reduce the rate of agricultural growth and welfare because of lower rainfall, shorter growing seasons, and accelerated land degradation, leading to increased loss of soil fertility and desert encroachment. Gas flaring is also a major environmental hazard, causing serious local pollution and contributing to climate change. More gas is flared in Nigeria than anywhere else in the world. The Delta region also faces a number of physical and geographical challenges including environmental degradation, pollution, oil spills and socio-economic, and political problems. The Government's 7-Point Agenda aims to address the existing issues in the Niger Delta region through the implementation of the existing Master Plan and appropriate funding of the Niger Delta development. The implementation of the plan is expected to improve the living standards of the people, as well as improve local governance. With respect to climate change adaptation issues, the implementation of which has a direct impact upon food, water and health challenges in the country, input to the WBG FY14-17 Country Strategy would be appropriate.

### **Annex 3: Climate Change Impact Assessment Framework (Starting Point for Class of 2012; Product of SIPA Class of 2011)**

This is attached as a separate 3-page document. Integration of the two would compromise the graphics of the framework.

**Annex 4: Table of Deliverables for Climate Change Adaptation II Capstone-Workshop**

| # | Name   | Description  | Content  | Type   |
|---|--|--|--|--|
| 1 | Detailed project work plan   | In order to ensure a full understanding of the scope, depth and breadth of this project, Booz Allen will send a small team to campus at the beginning of the semester to discuss and clarify project aspects in an open and frank manner. At this juncture, amendments may be made to the project’s objectives, as appropriate, and with full consensus of the student team members, Faculty Advisors, and the Booz Allen team. A detailed work plan should be accomplished by the student team and shared with Booz Allen.  | One detailed work plan   | Class, Faculty Advisors, and Booz Allen team members |
| 2 | Proposed framework for assessing climate change impacts            | Using the Spring 2011 workshop deliverable as a starting point, the class will fine-tune/modify the proposed framework for assessing climate change impacts in the Niger Delta which address at least three of the five Booz Allen focus areas for climate change adaptation: food, water, health, energy and biodiversity. In addition to this framework, each student should have a 2-paragraph research plan, which describes how they will break up research tasks, what data sources they intend to use, and any interviews they propose for the first phase of this study.   | One 1-2 page proposed framework with a 2-paragraph research plan for each student                      | Class Assignment                                     |
| 3 | Climate change impact assessment paper and associated bibliography | The class will author an assessment of climate change impacts in the Niger Delta, using their framework and an extensive bibliography to back up their predictions. Predictions should be in the form of a 5-page paper, authored by the entire class. Students should also include an annotated bibliography, which includes at least 5 sources per climate change area (no page limit). Students must come up with concrete predictions based on research – there is no “right” answer here, but students must show a well thought out response that makes use of their framework. A student editor(s) will be assigned to ensure a consistent style and approach to this impact assessment deliverable. | One 5-page assessment (using the framework created from deliverable #2) with an extensive bibliography | Entire Class   |
| 4 | Climate change concept paper setting forth recom-                  | Based on proposed policy solutions for gaps identified, the student team will author a concept paper (separate from the impact assessment developed in deliverable #3 above) which makes recommendations for USAID and WBG entities operating in the region on what policies should exist to ensure stability is maintained by   | 17 page concept paper, with a final 2-page executive   | Entire Class   |

| # | Name   | Description  | Content                                    | Type |
|---|--|--|--|------|
|   | <p>recommendations to USAID and WBG missions</p> | <p>ensuring climate resilient development in the Niger Basin. All recommendations will be derived with the intent to increase the climate change adaptive capacity, and as a result, reduce the threats associated with these climate change impacts in Nigeria/West Africa and specifically the Niger Basin.</p> <p>While it is understood that climate change is one of many drivers for future risk, it is considered to be a “threat multiplier,” to underlying socioeconomic and political conflict. Thus, the policy recommendations should look at how climate change adaptation could enhance stability in Nigeria and the West Africa Region for the medium-to-long-term.</p> <p>To produce this paper, students will be expected to do both secondary and primary research, making use of interviews with Booz Allen staff, USAID and WBG staff, and Columbia University/Affiliate staff to develop both an assessment of climate change impacts to USAID and WBG missions and recommendations for changes in organizational policy.</p> <p>An over-arching 2-page executive summary and the bibliography is part of this deliverable package, authored by the entire class. The deliverable will comprise 17 pages maximum, not including the bibliography. This is due at the end of the semester, but with a margin of time allowing for modification to final versions for Booz Allen acceptance prior to the last date of the semester. A student editor(s) will be assigned to ensure a consistent style and approach to this final deliverable.</p> | <p>summary, and extensive bibliography</p> |      |