

Opportunity Title: Making sense of the human response to climate change

Opportunity Reference Code: IC-16-43

Organization Office of the Director of National Intelligence (ODNI)

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How to Apply **Create and release your Profile on Zintellect** – Postdoctoral applicants must create an account and complete a profile in the on-line application system. **Please note: your resume/CV may not exceed 2 pages.**

Complete your application – Enter the rest of the information required for the IC Postdoc Program Research Opportunity. The application itself contains detailed instructions for each one of these components: availability, citizenship, transcripts, dissertation abstract, publication and presentation plan, and information about your Research Advisor co-applicant.

Application Deadline 4/15/2016 6:00:00 PM Eastern Time Zone

Description Recent studies suggest environmental change may lead to increased human conflict, in all its forms.

A lack of ground-truth data, plus a limited understanding of the complex inter-dependencies between nature and humans, has led to the derivation of preliminary ‘climate – conflict’ models that are recognized as overly simplistic.

An improved understanding of several core processes – such as a significant non-linear relationship between temperature and economic production – provides an opportunity to aggregate these models and quantify the underlying controls. In order to create such a model, key questions remain: which are the key independent and dependent variables in this process? How should climate data (temperature, rainfall, seasonality and the frequency of extreme weather events) be weighed relative to natural resource availability (food, water, and energy), environmental epidemiology, biodiversity, anthropogenic activities, geo-political and socio-economic factors? Further, does knowledge of these factors allow us to stress-test countries and statistically evaluate future risk? Can a ‘sense making’ approach help identify early opportunities for intervention?

Example Approaches:

This is a complex, wide ranging area of research, ideally suited to a multi-disciplinary effort across physical, social and political sciences. A key challenge is the identification, analysis and fusion of relevant multi-modal data, which could include partial, unreliable and contradictory information.

Research may involve local or regional (nested) interdisciplinary studies of (at least partially) ground-truthed historical data. A



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successful proposal will likely address one or more of the following broad problem areas:

- Building local or regional multivariate models to understand modern and historic nature – human interactions;
- Quantifying the controls that influence these key nature - human interdependencies, and identify factors or indicators that may allow this change to be anticipated;
- Applying these ‘conflict-relevant’ models to future climate change scenarios, quantifying uncertainty (wherever possible) and identifying future areas for research.

**Eligibility
Requirements**

- **Citizenship:** U.S. Citizen Only
- **Degree:** Doctoral Degree.
- **Discipline(s):**
 - **Business** (11 )
 - **Chemistry and Materials Sciences** (12 )
 - **Communications and Graphics Design** (6 )
 - **Computer, Information, and Data Sciences** (16 )
 - **Earth and Geosciences** (21 )
 - **Engineering** (27 )
 - **Environmental and Marine Sciences** (14 )
 - **Life Health and Medical Sciences** (45 )
 - **Mathematics and Statistics** (10 )
 - **Other Non-Science & Engineering** (13 )
 - **Physics** (16 )
 - **Science & Engineering-related** (1 )
 - **Social and Behavioral Sciences** (28 )