THE GLOBAL HUMAN SECURITY INDEX: CAN DISAGGREGATIONS HELP US TO FORGE PROGRESS?

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A Human Security Index (HIS) enumerating 200 countries was introduced in 2008. A community-level HSI is under development in the USA. Coastal communities face large disparities in components of human security. How can a HSI support improved policies/services (such as environmental or public health forecasts or warnings) for improving lives? Several issues are discussed.

Background

The first Human Development Report (HDR) and Human Development Index (HDI) (UNDP, 1990), enhanced perceptions of development from raw Gross Domestic Product (GDP) per-capita to a composite with knowledge and "a long and healthy life." The 1994 HDR (UNDP, 1994) discussed new dimensions in people-centric human security. This was characterized as "freedom from fear; freedom from want" but might be rephrased as "Life, Liberty, and the Pursuit of Happiness" plus "Diversity-in-Community." Pitsuwan (2007) has observed that human security is a recasting of longstanding concepts, and that "human security is the primary purpose of organizing a state in the beginning" (ibid).

HDI is more comprehensive/enlightening than GDP per capita, simple to compute and comprehend, and uses data that are compiled for most countries. However, the HDR progressed from 130 countries in 1990 to 173 in 1993, but to only 182 by 2009. Hastings (2009A) released an HDI covering 232 countries, to demonstrate that geographical enhancement was achievable – and indeed, germane to increased global value of the HDI. National HDRs (including a non-UN HDR for the USA (AHDP, 2008)) look at data within countries.

Hastings (2008, 2009B) released a prototype with 200 nation-societies – demonstrating achievability of an HSI. Components include (1) diversity, (2) peacefulness, (3) environment, (4) corruption control, and (5) empowerment through information. Comparison of the HDI and HSI shows considerable discrepancy, with some "economies" performing quite differently than their "societies." The HSI may help to explain how some "wealthy economies" might be seen by others as "less developed societies."

Some critics have noted strong statistical correlation between GDP per capita, literacy, and life expectancy components of the HDI. Such critics may have actually documented that normative or other approaches may be preferable to over-emphasis on statistical processes for analyzing HDI (or by extension, HSI).
Diversity among countries with respect to GDP per capita, literacy, and life expectancy can help us find good and not-so-good situations (and practices). For example, the USA's life expectancy at birth (LE) ranks ~50th in the world (CIA, 2010A). Though the USA's GDP per capita is among world leaders, it has exceedingly high GINI coefficient of income inequality compared to its peers (CIA, 2010B). The global HSI (Hastings, 2008, 2009B) shows that: (1) the USA's low rankings in some components of environmental indices (despite high rankings in other components of environmental indices), (2) high "legal corruption," (3) low performance in the Global Peace Index, and (4) global leadership in incarceration compare unfavorably with many peers.

What (unseen?) challenges might be faced by people attempting to strategize and deliver (public or private) services in any particular society? How can a HSI help guide the development of new strategies and actions (such as forecasts, warnings, and facilities) to improve situations of people and communities?

When the HSI was released, some people began engaging with the concept for possibly strengthening development planning. Could this be done regionally or thematically for coastal communities and climatic-meteorological, public health or socio-economic risk? If we look sub-nationally (within or across national boundaries) at communities, what component indicators could be used, or assembled, to benefit characterization and improvement in coastal areas? Could we thus better craft development plans, weather/climate hazard warnings, efforts to mitigate risk, and better respond to and recover from challenges?
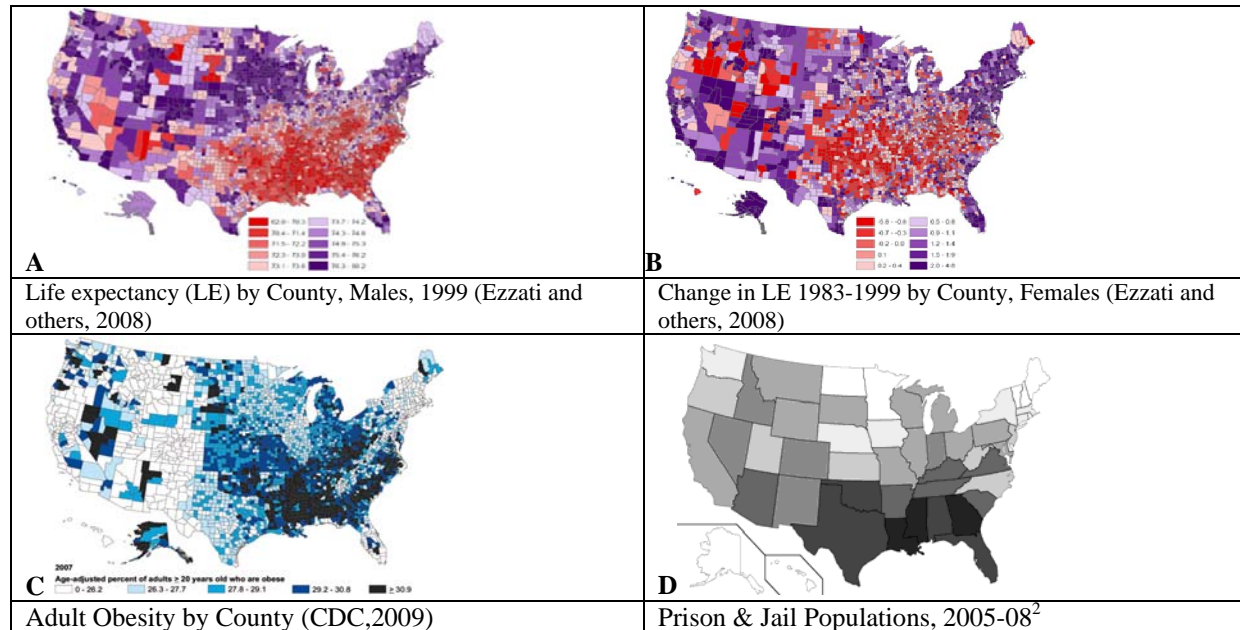

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Crafting a Human Security Index for the USA

The approach to crafting the HSI was an observational one. Imagine analysts desiring to document certain situations. Given available observing systems (space-based sensors, census bureaus, etc.) and datasets (e.g. scientific and socio-economic observations: estimated greenhouse gas emissions per capita; Global Peace Index; estimated county life expectancy at birth by education, income, race and ethnicity; architectural design maximum anticipated precipitation, wind speed, flood height and earthquake intensity; typical solar radiation and wind velocity patterns), how does any particular country appear at a national or local level? How can we achieve improved situations, helped by such data?

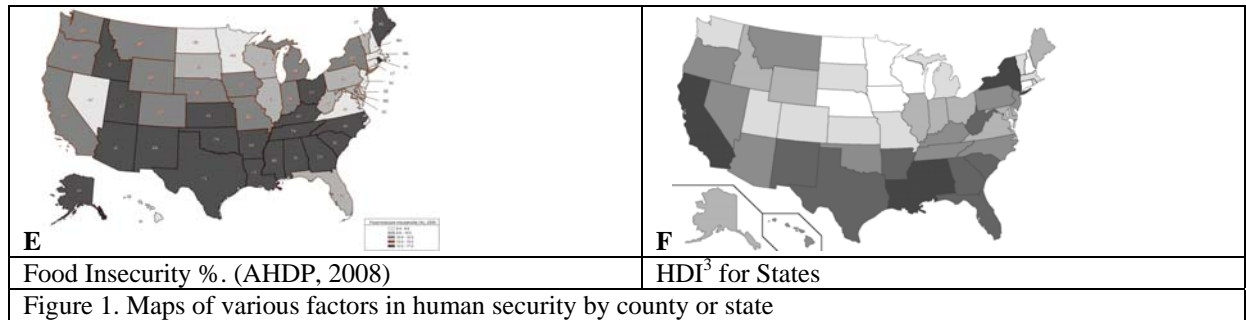Sample county and state data are mapped in Figure 1. Other data include:
1.   State and county estimates of low literacy (NCES, 2008): Estimates of adults below "Basic Prose Literacy Skills" on a county basis range from 4% to 65%.
2.   U. S. Bureau of the Census[1] data. The Gini coefficient of income inequality for the USA indicates the greatest income disparities of economies normally considered as "developed." County disparities range from .333 (comparable to Belgium) to .602 (similar to Sierra Leone). No state or county in the USA achieves Canada's national average of about .323 (CIA, 2010B).

Discussion of situational discrepancies that may impact human security is far beyond the page limits for this report. Very briefly, life expectancy (LE) (red in Figure 1A) is disparate by geography, race, ethnicity and gender but is as low as 58-62 years (Murray and others, 2006), below same-gender same-year national averages of several least-developed countries. Female LE has actually decreased in many counties (deep red in Figure 1B). Low functional literacy impacts HDI in several locales. The USA leads the world in incarceration

A	**B**
Life expectancy (LE) by County, Males, 1999 (Ezzati and others, 2008)	Change in LE 1983-1999 by County, Females (Ezzati and others, 2008)
C	**D**
Adult Obesity by County (CDC,2009)	Prison & Jail Populations, 2005-08[2]

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[1] http://factfinder.census.gov/home/saff/main.html?_lang=en etc.

[2] This is drafted by the author from Harrison and Beck (2005) and Sabol and others (2009), by summing the prison and jail populations in latest available data. Figures range from < 300 to > 1500 people per 10,000 inhabitants.

E	**F**
Food Insecurity %. (AHDP, 2008)	HDI[3] for States
Figure 1. Maps of various factors in human security by county or state	

(Walmsley, 2008, 2009) with rates widely unequal by locale-gender-ethnicity-race (Harrison and Beck, 2006). The global norm averages ~0.1% (Walmsley, 2009). Among USA black males aged 20-40 the rate is ~10% (Harrison and Beck, 2006). Worst situations are shown in reds in Figures 1A-1B and in darkest shades in Figures 1C-1F.

Coastal communities include standouts in functional illiteracy, poverty, inequality, depopulation, institutionalization (incarceration and centers for the aged), public health challenges (low life expectancy, decreasing female life expectancy, lifestyle diseases), and vulnerability to disasters such as floods and storms. Compare human security data with distributions of environmental risk. What challenges might exist where environmental risk overlaps human security problems? What about associated fear/distrust of authorities, doubts about or misinterpretations of current styles of public health or storm warnings and advice? How might services – such as forecasts, advice (e.g. move to designated storm shelters, or get gratis vaccinations to mitigate epidemics/ pandemics), and services be better crafted and delivered – guided by such human security data and interpretations thereof (and perhaps a richer diversity and social sensitivity among those crafting such policies and services)?

Data may be available at census block (~8 million in the USA), block group (~200000), census tract (~62000), county (~3200), congressional district (435), state (51 incl. DC), or only on a national level. Methodologies are being designed to assess candidate input indicators for HSI development, and to combine the indicator values at each geographic level into a nested composite index in a scientific geographic information system.

Spatial patterns indicate challenges and opportunities for policymakers and service designers / providers for coastal and other communities. The process (as well as the result) of designing, crafting, and assessing a Human Security Index may help us to visualize problems and craft improved approaches to governance, such as design and delivery of services to benefit coastal communities.

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[3] These were computed by the author using GDP per capita (BEA, 2009) adjusted by cost of living (Top50States, 2009), life expectancy at birth (ADHP, 2008), and literacy (NCES, 2008), in a manner paralleling that of the global HDI (UNDP, 2009). Lighter tones => higher state-level HDI.

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