Adding Natural Resource Indicators:
An Opportunity to Strengthen the MCA Eligibility Process

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The Millennium Challenge Corporation (MCC) currently uses 16 indicators of governance and policy performance to determine a country's eligibility for Millennium Challenge Account (MCA) finance. The MCC is proposing several changes to its selection process this year (see the Appendix for a short description). While most of these changes are modest, the addition of two natural resource management indicators, as "supplementary" data initially, is significant. This note focuses on the natural resource indicators; a subsequent analysis will examine the other proposed changes and the implications for country selection.

The MCA's authorizing legislation includes a provision that the MCC use objective and quantifiable indicators to evaluate countries' commitment to the sustainable management of natural resources. However, no measure meeting the MCC's basic criteria[1] existed when the indicators were first chosen in 2002. Therefore, in February 2005 the MCC established a Natural Resources Working Group to begin a search for an appropriate natural resources indicator.

After considerable consultations, the Working Group agreed on two indicators as serious candidates for adoption: the *Natural Resource Management Index* (NRMI), compiled jointly by Columbia University's Center for International Earth Science Information Network (CIESIN) and the Yale Center for Environmental Law and Policy, and the *Access to Land* indicator compiled by the International Fund for Agricultural Development (IFAD). Subsequent to the Working Group process, the MCC decided to

[1] The MCC looks at several elements in selecting indicators, including: consistency from year to year, linkage to policies that the government can influence within a two to three year horizon, linkage—theoretically or empirically—to economic growth and poverty reduction, broad country coverage, comparability across countries, analytical rigor, availability to the public, utilization of objective and high-quality data, and development by a third party. For more information on MCC's selection indicators see: http://www.mcc.gov/countries/selection/indicators.shtml

augment the IFAD *Access to Land* indicator by combining it with two measures from the International Finance Corporation's (IFC) *Doing Business* survey—the cost of and the time to register property—to form a composite Land Rights and Access indicator.

The MCC Board has consented to the incorporation of both the NRMI and the Land Rights and Access indicator into the FY 2007 annual selection cycle, but to be used only as "supplemental" data, at least for this year.[2] As supplemental data, countries' scores on these two indicators will not be included directly in the eligibility scorecard, but they may be used as supplementary information for the Board of Directors' discretionary decisions about country qualification (mostly employed for countries on the margin). The MCC has just submitted their proposed eligibility criteria to Congress and the public for a 30-day review period,[3] and in early November the Board will select countries for FY 2007. The Board will decide later this year whether and how to add the two new indicators to the eligibility scorecard more permanently, with the expectation that they will be fully incorporated into the FY 2008 selection cycle.

Overall, we agree with the MCC's recommendation to add the two new indicators to the selection process as supplemental data for FY 2007. We are most comfortable with the NRMI indicator, and slightly less comfortable with the newer composite land index, but we note there are some concerns about each of the indictors. We commend the MCC for the public consultative process it conducted that led to the identification of the NRMI indicator, although we note that the process for the composite land indicator was less thorough. As to how the two new indicators should be incorporated in the process more permanently next year, we agree with the MCC proposal that the NRMI be added to the "Investing in People" group of indicators, but do not agree that that is the appropriate placement for the composite land indicator. Instead, the composite land indicator should be included in the "Establishing Economic Freedom" group of indicators, along with some other changes to the indictors.

In considering the addition of the two indicators, there are four key issues: the strength of the MCC's consultative process, the quality of the two indicators, the

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[2] Millennium Challenge Corporation Adopts Environmental and Land Access Criteria for Selection of Eligible Countries, September 11, 2006
http://www.mcc.gov/public_affairs/press_releases/pr_091106_adopts.shtml
[3] Report on the Criteria and Methodology for Determining the Eligibility of Candidate Countries for Millennium Challenge Account Assistance in Fiscal Year 2007, September 8, 2006
http://www.mcc.gov/about_us/congressional_reports/FY07_Criteria_Methodology.pdf

mechanics of how to incorporate the two new indicators into the selection process, and the timing of when to add them. We consider each in turn.

The Consultative Process

The consultative process for the search for a new natural resources indicator has been commendable in its breadth, transparency and level of technical input. It began with a public invitation in 2005 to submit proposals for indicators. Over the last year and a half, the MCC, with input from a technical review committee, assessed over 120 potential natural resources indicators, and sought input and feedback from a wide range of environmental experts from the academic community, both public and private sectors, and NGOs. Our assessment is that the process that led to the selection of NRMI as a natural resources indicator was particularly strong, with solid public notification and consultation. With respect to the land indicator, the process that led to the inclusion of the IFAD component of the index was solid with extensive expert consultation.

However, there was much less public consultation about the two land components taken from the IFC *Doing Business* report, and their aggregation with the IFAD index. There was consultation with outside experts, as the recommendation to create this composite emerged from the technical land working group. But the MCC did not include the incorporation of the IFC indicators in the public documents that it released in July describing the process of selecting the natural resource indicators[4]—the addition of the IFC indicators came later and has not been publicized. As a result, the construction of the final composite indicator is likely to surprise many observers.

Indicator Quality

Natural Resources Management Index

The NRMI is a composite measure of four components:

- *Eco-region Protection* evaluates whether countries are protecting at least 10% of their biomes, using data from the World Wildlife Fund and the United Nations

[4] Results of MCC'S Search for a Natural Resource Management Indicator, July 2006 http://www.mcc.gov/public_affairs/fact_sheets/Fact_Sheet_NRM_Indicator.pdf

Environment Program World Conservation Monitoring Center. This measure assesses a country's commitment to maintaining biodiversity and protecting natural habitats. Key to this measure's applicability is that "biomes" is broad enough to include whatever eco-regions happen to exist in a country, thus allowing for better cross-country comparisons.

- *Access to Improved Wate*r measures the percentage of the population with access to at least 20 liters of water per person per day from an improved water source located within one kilometer of the person's home, using data from the World Health Organization (WHO) and United Nations Children's Fund (UNICEF).
- *Access to Improved Sanitation* measures the percentage of the population with access to facilities that separate excrement from human or animal contact, also based on WHO and UNICEF data.
- *Child Mortality* measures the probability of death for a child aged one to four years. Since substantial childhood deaths are due to environmental causes, this is thought to be a good proxy for environmental conditions. This data is from the Population Division of the United Nations Department of Economic and Social Affairs.

NRMI is a credible choice for a natural resources indicator, based on the thorough consultations used to arrive at its selection. It has broad coverage of MCA countries, with data available for 107 of the 113 MCA candidate countries, and its measures are sufficiently comparable across countries. A strong consensus has emerged that it is the best natural resources indicator available for the MCA eligibility process.

However, the NRMI is not without its drawbacks. Some experts question the definitional inconsistencies across countries and surveys for Access to Water.[5] In addition, the child mortality index is an output, not a policy that governments can change, and the MCA indicators ideally should focus on the latter. Perhaps most importantly, the water and sanitation data are updated very infrequently. The current water and sanitation figures used in the NRMI are from 2002 The WHO and UNICEF have in the past only updated data on 10 to 12 year cycles. This rate of data reporting is insufficient to capture improvement or deterioration in country performance from year to year and does not meet the MCC's own standards for a "good" indicator. Some improvements appear to be

[5] L. Becker, J. Pickett, and R. Levine. (August 2006). Measuring Commitment to Health: Global Health Indicators Working Group Report. Washington D.C.: Center for Global Development.

underway: CIESIN and Yale say they are expecting updated numbers early next year, and apparently WHO and UNICEF have committed to increase data collection to a three to five year cycle. ***Although an update every three years would be an improvement, it is not adequate for MCC purposes. In our view, the MCC must devise a strategy to encourage the key agencies to update the data more frequently if the MCC is to continue to use the data.***

Land Rights and Access

The Land Rights and Access indicator is an aggregation of IFAD's *Access to Land* (50% weight) and the IFC's Days to Register a Property (25% weight) and Cost of Registering a Property (25% weight). The IFAD *Access to Land* indicator is formed from an equally weighted average of five subcomponents:

- the extent to which the law guarantees secure land tenure for the poor;
- the extent to which the law guarantees secure land tenure for women, indigenous peoples, and other vulnerable groups;
- the extent to which land is titled and registered;
- the status and functionality of formal land markets; and
- the extent to which the law provides regulation for the allocation and management of communal lands.

IFAD introduced the indicator just last year as part of its new performance-based allocation system. IFAD plans to update it annually, which makes it particularly useful as an MCA eligibility indicator. In effect, the composite Land Rights and Access indicator gives a 10% weight to each of the five IFAD sub-components and 25% weight to each of the two IFC indicators—the number of days and the costs to register land.

Conceptually, the composite Land Rights and Access indicator makes a great deal of sense for the MCA as a natural resource indicator. Clear legal status of land holdings and ease of registering and transferring title are likely to lead to stronger management and care of land as a resource, and greater ability to use land appropriately as an economic asset, thus making strong links to economic growth and poverty alleviation. Thus, at a broad level we support the inclusion of some version of the Land Rights and Access indicator into the MCA eligibility process. However, there are some concerns.

The IFAD indicator is plausible but untested, so its weakenesses and its relationship to land security, growth, and poverty reduction are unclear. Because it is new, there are a few limitations to its current form. A country's scores are determined by answers to a narrative questionnaire, leaving room for a degree of subjectivity. While there are currently mechanisms in place to maximize the consistency of country scores within regions, consistency across regions is still lacking, though IFAD is working to remedy this. The IFAD indicator also focuses exclusively on rural land issues, so it overlooks urban land markets, which can be very different.

The IFC indicators provide a complement to the IFAD indicator since their two measures are more actionable and easier for countries to adopt policy changes that yield shorter-term results in comparison to the IFAD indicator which measures longer-term effects. The IFC indicators also fill the gap on urban land policies by having a broader focus. Furthermore, while the IFAD indicator is strong on measures of equity, the IFC data adds measures of efficiency. Also updated annually, the IFC indicators provide a good measure of a country's progress from year to year.

Perhaps the most important concern is insufficient country coverage. The IFAD indicator is missing data for 17 MCA candidate countries; the IFC also lacks data for 17 candidate countries. Of these, the two source only overlap on two missing countries. ***Therefore 32 of the 113 MCA candidate countries (28%) will automatically fail the land tenure indicator based just on incomplete reporting***. Experience has shown that use of an indicator by the MCC can encourage reporting organizations to broaden country coverage, as has happened with the IFC's *Doing Business* data, among others. ***But the clear implication is that the MCC should create a strategy in coordination with IFAD and the IFC to ensure rapid expansion of country coverage if the indicator ultimately is to be useful***.

Incorporating the Indicators into the Selection Process

For all the careful consideration that the MCC put into the technical makeup of the new indicators, there seems to have been much less consideration of how to incorporate them into the selection process. The MCC is proposing that both indicators should fall within the Investing in People category. This makes sense for the NRMI. Its focus on access to improved water sources, access to improved sanitation, and child mortality clearly make it appropriate for the Investing in People basket.

The same is not true for the Land Rights and Access indicator. There appear to be two reasons why the Land indicator might be put in the Investing in People basket. The first is convenience. The MCA eligibility process currently includes six “Ruling Justly” indicators, four “Investing in People” indicators, and six “Establishing Economic Freedom” indictors. Thus, simply adding the two new indictors to “Investing in People” would make for six in each category. But while easy, this is not a solid rationale.

A second reason is the more substantive argument that secure land rights give people greater security around an economic asset and a social safety net which allows them to make human capital investments they might not otherwise by able to make. Thus, by providing greater security and expanded economic opportunities, stronger land policies are an investment in people.

But while the argument has some merit, ultimately it is not compelling. The same argument can be made for almost any of the 16 indicators. For example, reducing the days or costs to start a business allows for greater economic opportunities for all entrepreneurs, including the poor, to reduce poverty and provide an economic safety net. It is well known that high rates of inflation are particularly harmful to the poor; thus a key first step in providing a social safety net and protecting the individual welfare of the poor is to reduce inflation. The same argument can be made for reducing corruption, strengthening the rule of law and protecting civil liberties. At some level, all the indicators can be thought of as investing in people, since increasing and protecting the welfare of individual people is what the development process is all about at its core.

The better fit for Land Rights and Access is in the Economic Freedom category. Improving land rights and the access to land will strengthen the value of land as an economic asset, either directly for productive purposes (e.g., for cultivation, to locate a business, or to use land as an asset that can be pledged as collateral of other indirect purposes). (It also helps guarantee basic rights for home ownership, which would be an argument for placing the index in the Ruling Justly basket, along with civil liberties and the rule of law). An important point is that the enhancement of economic value is the link between the land index and management of natural resources, which is the original motivation. With stronger and clearer legal rights that extend over time and enhanced economic value, land is likely to be used and conserved more carefully as a natural resource. Land is often exploited when tenure rights have short duration, so holders have the incentive to exploit and exhaust all the economic value quickly.

Although placing the NRMI in the Investing in People basket and placing Land Rights and Access in the Economic Freedom basket is conceptually solid, it creates a problem: there would be seven Economic Freedom indices and five Investing in People indices. Fortunately, there are good solutions to this dilemma.

First, the Economic Freedom basket already suffers from a major weakness. With the addition of the "Costs to Start a Business" indicator, it is now very easy for a country to pass these indictors. All it must do is keep inflation under 15% and take steps to reduce the days and costs to start a business. In effect, the MCA process now implies that this combination is sufficient to ensure a sound economic environment for growth and poverty reduction, which it is not. The Economic Freedom basket would be significantly strengthened by combining the days and costs to start a business into one indicator, and then adding the Land Rights and Access indicator. Combining the days and costs to start a business would be conceptually symmetric to the Land Rights and Access indicator procedure that combines the days and costs to register a property. This would make for a solid set of indictors, and would place the Land rights indicator where it belongs.

The remaining issue would be the odd number of indictors in the Investing in People basket. ***This should be seen more as an opportunity rather than a problem***. At the creation of the initial MCA eligibility process, there was a desire to come up with six Investing in People indicators, but a shortage of appropriate indicators, particularly in health, made it difficult to do so. With the addition of the NRMI indicator, very credible potential solution is to add an additional education indicator. This would give education the attention it deserves. It would also ease concerns that the addition of the two new indicators would dilute the attention that countries would give to the education indicators —concerns that have merit in the current proposal.

There are at least three relatively strong education indicators that could be added:

- ***Primary school enrollment rates***. The MCC considered using enrollment rates at its inception, but decided that completion rates were a better indicator of educational achievement. That was the right choice, but now there is an opportunity to use both. Enrollment rates are easier for governments to influence, and are a first step in achieving higher completion rates. The combination of both enrollment and completion rates would be strong. Enrollment rates are highly correlated with increased literacy and lower infant mortality, although not strongly correlated to economic growth.

- ***Girls' primary school enrollment rates***. This might be the best potential candidate, as it focuses attention on enrollment rates of girls, and increased girls education has been shown to be strongly associated with a wide range of development outcomes.
- ***The ratio of girls to boys in primary school***. This indicator focuses on gender equity in education, although it says less about attainment (a high ratio can be achieved with low enrollments of both boys and girls). It is widely available and updated regularly. The U.N. uses it as an indicator to achieve the Millennium Development Goal of "promoting gender equality and empowering women." The ratio is highly correlated with literacy rates, but less so with other development outcomes.

By taking this combination of steps, the MCC would create a much more solid set of indicators that would strengthen both the Investing and People and the Establishing Economic Freedom baskets by placing each indicator where it belongs and by adding new information where appropriate. This alternative requires additional analysis, but it appears to be a credible alternative to the current proposal, with several key advantages.

Timing

Some analysts have argued that the new indices should be incorporated into the selection process immediately as core indicators for the FY 2007 selections, and not used only as supplemental data. But the MCC has it right in its proposal to use the information as supplemental data this year with the expectation of full incorporation next year. There are two strong reasons to take this two-step approach.

First, while adding the indicators makes sense, all of the work needed for full inclusion has not yet been completed. Most importantly, there are still questions about exactly how to add these indicators to the selection process. Moreover, since the data are new, there are undoubtedly some revisions that will be needed to improve their construction. It is important to get the process right rather than rush it through.

Second, it would not be fair to candidate countries to change the goalposts without adequate notice. Countries that have been working hard to qualify under the old procedures could be quite surprised and unhappy to see the rules change without giving them a chance to react. It would be imprudent of the MCC to potentially damage the incentive effect it has generated in countries committed to reforming their policies in order to gain access to MCA resources. It would be much more appropriate for the MCC to publicly announce its intention to use the indicators next year than to immediately change the system. In this regard it is worth recalling that the MCC provided 18 months between the time it announced its original selection process in November 2002 and actually selecting the countries in May 2004, giving countries adequate time to respond.

Conclusions

The MCC should be commended for the very productive process it initiated around the inclusion of a new natural resource indicator. For a foreign assistance agency searching for a "selectivity" indicator, the extent of public participation and debate is unprecedented. The process was particularly strong for the NRMI index, and also solid for the IFAD land index. We note, however, that the inclusion of the IFC land indices was not part of the public process. In addition, we support the MCC's proposal to incorporate the indicators as supplemental data for FY 2007, with the expectation of full incorporation in FY 2008.

Although the indicators are good choices, they have some weaknesses. The water and sanitation components of the NRMI are updated too infrequently, and the target of updates every three to five years is not good enough. The IFAD index is new and requires additional testing. Moreover, the composite Land Rights and Access index has insufficient country coverage. The MCC needs to devise clear strategies of how it will work with these organizations to ensure the indicators are strengthened over time.

The current MCC proposal to add both new indicators to the "Investing in People" basket is not the right approach. The MCC has a big opportunity to significantly strengthen the indicators through a four-step process: (1) add the Land Rights and Access to the "Establishing Economic Freedom" basket, (2) combine the existing days to start a business and costs to start a business in the Economic Freedom basket, (3) add the NRMI indicator to the “Investing in People” basket, and (4) incorporate an additional education indicator, such as the girls’ primary school enrollment rate, to the “Investing in People” basket. The result would be a stronger and deeper set of indicators that would receive widespread support.

Appendix

Additional Indicator Changes for FY 2007 Selection

In addition to the two new indicators, MCC is making changes in data sources for three existing indicators. Changes will be implemented in the FY 2007 selection process. CGD will provide a more in-depth analysis of these source changes in its forthcoming piece predicting the FY 2007 eligible countries. The additional changes include the following:

Public Expenditure on Health: MCC plans to switch from self-reported data gathered from national governments to WHO data. The WHO's National Health Accounts Initiative, supported by USAID funding, has enabled more current and reliable data for all WHO member countries.

Public Expenditure on Primary Education: MCC plans to use UNESCO as the primary source for primary education expenditure data. Self-reported data gathered from national governments will now serve as a secondary source, used only to fill in gaps where UNESCO data is missing. As UNESCO coverage increases (it currently covers only approximately 90 countries), MCC will phase out the use of self-reported data.

Inflation: MCC plans to move to the exclusive use of IMF's World Economic Outlook (WEO) data base. Improvements to data quality and country coverage have enabled this transition to single-source reporting instead of having to rely on two sources (WEO and the IMF's International Financial Statistics) with different methodologies.