

# INTEGRATING ECOLOGICAL RISK IN SOVEREIGN CREDIT RATINGS AND INVESTMENTS

## PROJECT OVERVIEW



## AN OVERVIEW

UNEP FI, Global Footprint Network, Volans and a number of leading financial institutions – including investors, rating agencies and financial information providers - are collaborating on a project to investigate the link between ecological risk and country level risk in sovereign bonds.

The project aims to assess the financial materiality of ecological risks relevant for the credit risk evaluation of government bonds, and to develop a methodology to enable credit rating agencies, investors and financial information providers to integrate ecological data in their respective models.

In this way the project hopes to build a more comprehensive and risk-inclusive understanding of how to evaluate sovereign bonds. In addition, it aims to increase awareness and decrease investment risk due to higher resource stability for both ecological creditors and national debtors. Institutions will thus be enabled to work towards better inclusion of financially-material environmental, social and governance (ESG) issues in financial products and services.

## RATIONALE

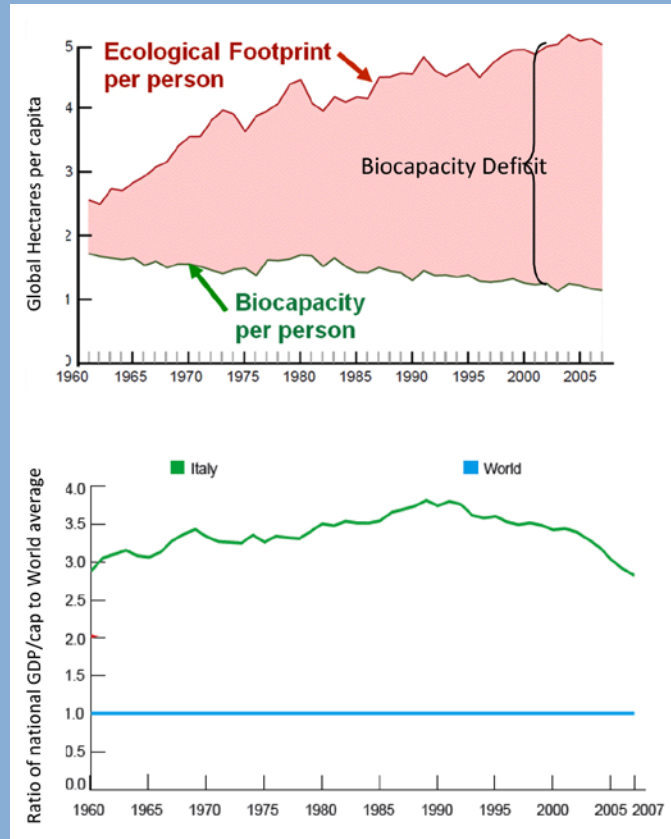
We live in an ever-more ecologically constrained world, as is clear from climate change, water scarcity, food crises, deforestation and the many additional environmental crises we face today. Given current consumption patterns and population trends, a country's use and availability of ecosystem services, including its ecological resources, will play an increasing role in the **health of its economy**, its ability to secure a high quality of life for its citizens, and its ability to meet **future debt obligations (positively or negatively)**.

Nations have thought that the social and economic variables they monitor were all they needed to understand their competitiveness and economic robustness. This is no longer the case. The way we use natural resources – such as fish, crops and forests that healthy ecosystems provide – is increasingly becoming relevant in a resource constrained world. It can have an effect on key economic indicators, such as GDP, credit rating and employment. For countries to succeed economically it is paramount to understand that its use of natural resources (its 'footprint') is to an extent related to the availability of 'biocapacity' (the ability of an ecosystem to produce useful biological materials and to absorb carbon dioxide emissions).

## THE ECOLOGICAL FOOTPRINT

The difference between a country's Ecological Footprint and its biocapacity translates into a biocapacity surplus (if the footprint is lower) or deficit (if a country's ecological footprint of consumption is higher than their domestically available biocapacity). In such a case, a country is dependent upon net-importing resources and ecological services from other nations. Some countries have a surplus, but a growing number of countries are in a deficit as highlighted below in the case for Italy.

The world as a whole is moving into ever larger ecological overshoot. Yet, Italy's per person GDP (compared to world average) is starting to decrease, indicating that the capability to pay for these resources may diminish (see graphs on the right). Countries that depend heavily, in net terms, on ecological services from other nations may find that their resource supply may become insecure or unreliable and that countries may suffer economically as resource constraints tighten globally.



Italy's biocapacity deficit is growing as their ability to purchase from the world is decreasing. This trend may undermine Italy's economic stability.

## OBJECTIVES

This project seeks to assess financial materiality of ecological risks relevant for the credit risk evaluation of government bonds. Global Footprint Network and UNEP FI will work together with different financial institutions (asset owners, investment managers, credit rating agencies and information providers) to analyse the linkages between ecological and financial risk, and explore how Ecological Footprint trends can shed light on financially material threats and risks that are not currently included in credit ratings. Other potentially relevant criteria, which are currently not accounted for in credit ratings, will also be analysed and integrated into the methodology. The aim is to foster shared learning from working with a number of banks, investors and credit rating agencies, and to enable the integration of ecological risk in sovereign credit ratings and government bonds.

## ACTIVITIES

UNEP FI will convene a working group of fixed income, rating and credit risk specialists from participating financial institutions, Ecological Footprint scientists at Global Footprint Network with sustainability and innovation experts at Volans.

This 2 year project is sectioned into separate research phases:



### **Company Engagement (1/2 – 1 Day Workshop)**

Initiation exploratory workshop between Global Footprint Network scientists and FI analysts; Requirements gathering exercise

### **Research Phase A (6 Months)**

Initial research into application of Ecological Footprint data with particular relevance to financial risk indicators

### **Company Engagement (1/2 – 1 Day Workshop)**

Follow up workshop with FIs to present research findings and gather feedback

### **Research Phase B (6 Months)**

Second phase research to further develop and refine the research into linkages between ecological and financial risk

### **Engagement (1/2 – 1 Day Workshop)**

Joint assessment of draft output from research and engagement process; Sign off from FIs on the research output

### **CRA Engagement and Outreach\* (4-6 months)**

Testing potential integration of Global Footprint Network data into a sample CRA model for assessing government bond credit rating

### **Testing Phase (6 months)**

Testing of the ecological risk-adjusted credit rating model for government bonds on a number of countries, and compared with the default model; High level findings to be shared with all participation companies and institutions

### **Concluding workshop:**

Presentation of findings and final sign-off from participating member

\* IP and licensing issues will be addressed at this stage.

## OUTPUTS

We envisage the following outputs for these specific projects:

- **Methodology Paper:** Analysis of the financial materiality of ecologically-relevant criteria in country credit risk models - a key piece of work that will aim to substantiate the business case for financial institutions and ratings agencies to include ecological data into country credit risk analysis.
- **Brief summarising the results from testing the methodology:** Results from testing the methodology and Global Footprint Network data to bonds from different countries at different levels of maturity.
- **Dissemination of findings** to UNEP-FI members in a series of interactive forums and public reports.

## BENEFITS OF PARTICIPATION

- **Experience evaluating ecological risks at the country level**
- **Access to leading research from internationally recognised expert, Global Footprint Network**
- **First mover advantage in the incorporation of new-financial risk issues into existing risk models**
- **Improved understanding of system risk.**
- **Enhancing performance on an increasingly material issue**
- **Insights into financially material data relevant for investment decision making and product development**

## INPUT REQUIRED FROM PARTICIPANTS

- **Endorsement of project to invite credit rating agencies**
- **Financial contribution to make this project possible**
- **Internal outreach to country rating analysts or fixed income divisions within your institution**
- **Attendance at engagement meetings & participation in ad hoc information requests**
- **Review and critique of final methodology**
- **Participation in testing phase**



## PROJECT TEAM

UNEP FI will oversee and manage the project, recruit and convene participants and will lead on the publicity, production and distribution of the final report. Global Footprint Network will lead the project research, initial training and design and also co-facilitate steering committee meetings, and will work closely with members to conduct the research and analysis. Global Footprint Network will also contribute to the final report. Financial institutions, comprising of both UNEP-FI members and non members, will provide input and direction in project design and will work closely with Global Footprint Network technical staff in the research and analysis.

## TIMELINE

### Project Kick Off

- Project kick off workshop
- Timeframe: October 2011

### Research Phase:

- Scientist – analyst collaborative research
- Timeframe: Oct 2011- Oct 2012

### Road testing:

- Credit rating agency engagement & testing opportunity of risk adjusted methodology
- Timeframe: Nov 2012 – Nov 2013

### Steering Committee

A steering committee – comprising of representatives from the partners and participating institutions as well as thought leaders in the finance, fixed income investment and sustainability fields – will ensure the project will successfully meet the objectives and deliver the designated outcomes.

### Current Committee Members

**John Elkington** – Founder, Volans

**Paul Clements-Hunt** – Head, UNEP FI

**Mathis Wackernagel** – President, Global Footprint Network

**Richard Burrett** – Partner, Earth Capital Partners

## CONTACT DETAILS



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Innovative financing for sustainability

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