

Sustainable Innovation 2010

OsCarbon: open source software tools for calculating the environmental footprint of organisations

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The beginning of the twenty-first century marks a turning point in the environmental consciousness of political and economic leaders. They are starting to accept that environmental problems are urgent and vital. New phenomena and events have attracted the attention of audiences throughout the world and especially governments. The results of scientific research on climate change led to a consensus with explicit conclusions. It is thus commonly accepted that a major part of the climate changes observed during the last decades results from the human activities. The main prospective models on climate change assess that the average temperature will increase between 2 and 6 degrees Celsius over the next 100 years, and all possible consequences cannot be completely specified. It is in this context that in 2007, the IPCC (Intergovernmental Panel for Climate Change) received the Nobel Prize and that in February 2008, the Stratigraphy Commission of the Geological Society of London formally proposed to consider that in geological term, due to the influences of man on Earth, we are now, after the Holocene period, in a new geological era: the *Anthropocene*. In geopolitical terms, some scientists are describing this new phase in the history of humanity as *planetarisation*, linking together planetwide environmental issues (water, energy, biodiversity, etc.), poverty, the concentration of powers and anthropotechnological changes. In order to understand the system around us and to take decisions at the same time in terms of production, consumption and political choices, there is a need for internationally-renowned tools which make it possible to quantify, map and model – in other words to analyse – the environmental impact of organisations. Tools and standards are only now starting to emerge around the world. Although some tools already exist in relation to the calculation of GHG emissions, these have certain disadvantages: they are linked to national standards, are often only "methods", rely on private or limited software licences and/or do not have a programming interface allowing for a level of abstraction sufficient to allow a large number of operators to freely develop new extensions. The main methods for calculating GHGs are: the "Bilan Carbone" from the French Environment and Energy Management Agency (ADEME); the PAS 2050 standard developed by DEFRA (Department for Environment Food and Rural Affairs), BSI British Standards and Carbon Trust in Great Britain; as well as the solutions from the World Research Institute in the United States. The interests of the "Global Reporting Initiative" (www.globalreporting.org) should also be taken into account. Starting from national and ISO standards, OsCarbon is developing Open Source software structured around open programming interfaces and plugins which makes it possible to determine calculation indicators related to the environment like GHGs, energy, water consumption, transport, waste, impact on the soil and earth, biodiversity social indicators around the ISO 26000 standard; while taking account of the logical framework of the Human Development Index from the UNDP (United Nations Development Programme), the Poverty Environment Partnership (PEP) and the objectives underpinning the work of the Environment group of the Development Assistance Committee /OECD. OsCarbon is proposing to present its solutions at the conference; solutions designed to guide companies in their approach towards innovation and environmental commitment, in consideration of the fact that only companies which skilfully adapt themselves will be the leaders of tomorrow. OsCarbon thanks you for your attention in reading this text. In academic terms, the work of OsCarbon may, if necessary, be recommended by:

- Mr Fabre, Economics Professor, Doctor, Chairman of the AFNOR (French Standardisation Association) GC36 standardisation group delegation at the ISO, Former Chairman of the University of Paris VIII;

- Mr Afanassiev, Economics Professor, Doctor authorised to manage doctorate theses in France and Russia, Rector of The Budget and Treasury Academy of the Ministry of Finance of the Russian Federation, member of the Board of the Minister of Finance of the Russian Federation. In terms of business, OsCarbon's objective is to become the global leader in Environmental Content Management System solutions within 3 to 4 years. Client references can be provided on request.