

Tre eventi – e tre date – costituiscono le tappe fondamentali della storia dello sviluppo sostenibile, degli accordi e dei trattati sul tema e della crescente attenzione che a esso viene dedicato dalla comunità internazionale: la Conferenza delle Nazioni Unite sull’Ambiente Umano, tenuta a Stoccolma nel 1972, la Conferenza delle Nazioni Unite su Ambiente e Sviluppo (Summit della Terra), tenuta a Rio de Janeiro nel 1992 e, infine, la Conferenza delle Nazioni Unite sullo Sviluppo Sostenibile (conosciuta anche come Rio + 20) che si terrà sempre a Rio de Janeiro quest’anno.

Un periodo lungo quasi mezzo secolo che ha visto rapidamente cambiare, specie nell’ultimo ventennio, la geografia politica ed economica del pianeta. Nel 1992 eravamo lontani dall’immaginare l’ascesa vertiginosa di Brasile, Russia, India, Cina e Sud Africa, determinanti oggi per lo sviluppo economico globale. Eppure è accaduto.

Tracciare un bilancio di quanto è stato fatto in questi quarant’anni per difendere la salute del nostro pianeta non è facile. Come tutti i grandi processi che mutano la percezione del rischio futuro e la cui gestione richiede il coinvolgimento e un cambio di mentalità di molteplici attori, pubblici e privati, di paesi ricchi e poveri, anche questo presenta inevitabilmente un bilancio con luci e ombre.

È un fatto, comunque, che l’impegno globale per la sostenibilità dello sviluppo sia cresciuto e che lo stesso concetto di sviluppo sostenibile sia sempre più chiaramente declinato nelle sue tre dimensioni costitutive: quella economica, quella ambientale e quella sociale. La nostra rivista – come testimonia lo stesso titolo «Equilibri» – fin dal primo numero ha fatto propria tale definizione e ha contribuito ad argomentarla e a diffonderla nel nostro paese. Seguendo tale tradizione, proponiamo oggi la descrizione di come sia possibile misurare le tre dimensioni dello sviluppo con un unico indicatore, risultato di grande interesse di una delle ultime ricerche che la Fondazione Eni Enrico Mattei ha svolto in questo campo.

Ma non c'è solo questo. Proprio per prepararci e prepararvi al meglio in vista dell'ormai imminente evento di Rio + 20, «Equilibri» presenta una serie di contributi che toccano i vari temi in discussione al vertice.

Tra i principali punti in agenda vi sarà il processo di transizione verso una *green economy* mondiale, in grado di coniugare crescita e ambiente. Al centro di questa discussione c'è un tema che sta acquisendo sempre maggiore importanza, ovvero quello della lotta alla povertà energetica e dell'accesso sostenibile all'energia come strumento e preconditione per lo sviluppo sociale ed economico dei paesi poveri.

Un altro punto di grande rilevanza inserito in agenda è quello della definizione di un nuovo quadro istituzionale per lo sviluppo sostenibile, ovvero la riforma del sistema di *governance* delle organizzazioni multilaterali e il ruolo centrale che in tale ambito potranno giocare anche gli accordi bilaterali.

Rio + 20 sarà anche l'occasione per affrontare in maniera più decisa la questione del contenimento delle emissioni di gas serra e tentare di ottenere il risultato di un maggiore coinvolgimento o di un impegno vincolante da parte di tutti gli Stati (Cina e Stati Uniti *in primis*) che ancora non lo hanno fatto. Infine, sotto i riflettori rimarrà anche la questione della biodiversità, che continua a diminuire nel mondo nonostante già nel 1992 i paesi partecipanti abbiano firmato un trattato vincolante.

Certo, dopo quattro anni di crisi economica, ci si chiede se le politiche di austerità adottate da diversi governi non corrano il rischio di frenare o attenuare l'impegno politico per lo sviluppo sostenibile. La crisi e l'elevato indebitamento delle società occidentali sono noti e visibili a tutti, ma dovrebbe esserlo anche il debito di tipo ambientale che stiamo contraendo con la Terra. Sono problemi da affrontare in modo unitario e non in opposizione, proprio come suggerisce il concetto di *green economic development*.

L'idea di sviluppo sostenibile, da questo punto di vista, è rivoluzionaria e innovativa, proprio perché mette in discussione l'ipotesi che sia possibile

una crescita economica illimitata, senza vincoli e in assenza di rischi. Ma comprendere e tenere conto di tutti i vincoli nel momento in cui progettiamo il nostro futuro è l'unico e vero segreto per riuscire a superarli. E per continuare a crescere, almeno quanto serve per garantire pari opportunità e condizioni di vita umane a quell'ampia parte del mondo, troppo spesso dimenticata, che ancora oggi ne è esclusa.

EQUILIBRI

1/2012 RIVISTA PER LO SVILUPPO SOSTENIBILE

Al lettore 5

FOCUS: RIO + 20

Vent'anni dopo. Un nuovo inizio?
di Carlo Carraro 11

La *green economy* per lo sviluppo sostenibile e l'eradicazione della povertà
di Alessandra Gorla 17

Il *Global Compact* e le imprese italiane verso Rio 2012
di Marco Frey 28

Lo sviluppo sostenibile non è un'opzione
di André Corrêa do Lago. Intervista di Roberta Giacconi 33

L'Indice di sostenibilità FEEM 2011
di Lorenza Campagnolo, Fabio Eboli e Elisa Portale 41

Sostenibilità, scienza e formazione
di Carlo Giupponi 50

Lo sviluppo sostenibile da Rio 1992 a Rio + 20
di Paolo Cominetti e Sergio Vergalli 57

Un quadro istituzionale per lo sviluppo sostenibile
di Cecilia Mezzano e Sergio Vergalli 67

SURPLUS

Monete e sovranità
di Geminello Alvi 77

LA NATURA COME LIMITE

Per una Terra sostenibile

di Paul Hawken. Intervista di Roberta Giaconi 83

FINANZA PER IL CLIMA

Secondo appuntamento con la finanza per il clima

di Alessandra Gorla 95

GEPOLITICA PER L'ENERGIA

Oltre il 2020. Le prospettive energetiche europee di lungo periodo

di Simone Tagliapietra 109

Dopo la primavera arriva l'inverno?

di Ödül Celep e Volkan Aytar 117

Irannet e Ahmadinejad, lo specchio digitale delle sue brame

di Giuliano Di Caro 125

Nuove geografie petrolifere. L'ascesa dell'*unconventional oil*

di Emanuele Bompan 130

I digestori: come smaltire reflui zootecnici e produrre energia

di Camilla Minarelli 133

VISIONI

Il futuro quotidiano

di Ughetta Molin Fop e Chiara Zanandrea 141

IL MONDO DI CARTA

La natura dell'Europa

di Franco Farinelli 151

LETTERE INTERNAZIONALI

Noi siamo il 99%

di Sandro Malavasi 159

La «primavera araba», un anno dopo
di Daniele Atzori 163

Abstracts 171

Hanno collaborato 181

FOCUS: Rio+20

Twenty Years Later. A Fresh Start?, Carlo Carraro

The United Nations Conference on the Human Environment held in Stockholm in 1972, twenty years *before* the Earth Summit in Rio in 1992, marked the first milestone in the history of international cooperation for the environment. The 1992 Rio summit delivered the first global agreement on climate change control. Twenty + twenty years *later*, the Rio+20 conference, scheduled to be held in June 2012, will open a new stage in international negotiations with the participation of developing countries, and its focus will be broadened to include a debate on the global and sustainable «development that meets the needs of the present without compromising the ability of future generations to meet their own needs».

Keywords: Rio+20, Sustainable Development

A Green Economy for Sustainable Development and Poverty Eradication, Alessandra Gorla

This short article is the Italian version of the FEEM input to the open and transparent process launched by the UN to prepare a draft text, based upon all preparatory inputs, that will serve as the basis for the outcome document of the Rio+20 United Nations Conference on Sustainable Development, to be held in Brazil in June 2012. Twenty years after Rio, Rio+20 will address gaps and challenges from the twofold perspective of a green economy in the context of sustainable development & poverty eradication and of the institutional framework for sustainable development. This article highlights the main challenges ahead, identifies key methodological issues to be addressed from an economic research perspective – illustrating relevant FEEM work to advance research in this field, and provides a few policy insights.

Keywords: Sustainable Development, Green Economy, Poverty Eradication

The Global Compact and Italian Firms towards Rio 2012, *Marco Frey*

A strategic policy initiative for development, within which businesses and society commit to aligning their objectives toward sustainability, this is the role of Global Compact, supported by business organizations, such as the Business Council for Sustainable Development and the International Chamber of Commerce.

Keywords: Global Compact, Sustainability

Sustainable Development is not an Option, *Roberta Giaconi interviews André Corrêa do Lago*

Twenty years after the first UN Conference on Environment and Development, Brazil prepares itself to host the summit again on June 20-22, 2012. The country has deeply changed since 1992 and its economy has strongly improved. We talked about it with Ambassador André Corrêa do Lago, head of the Foreign Affairs Ministry's Environmental Department and chief negotiator for Brazil in Rio.

Keywords: Sustainable Development, Brazil

FEEM Sustainability Index 2011, *Lorenza Campagnolo, Fabio Eboli and Elisa Portale*

This article presents the results of the FEEM 2011 Sustainability Index developed by Fondazione Eni Enrico Mattei. FEEM-SI assesses sustainability across countries over time, based on alternative development scenarios.

Keywords: Sustainable Development, Sustainability Index

Sustainability, Science and Education, *Carlo Giupponi*

The article briefly overviews the developments around the concepts of sustainability and sustainable development, and their current relevance in

face of ever more globalised subsequent crises of financial, economic and environmental nature. It appears that what learnt in the global change science could be integrated in the mainstream of sustainability analysis to develop a new paradigm of Sustainability Science, a trans-disciplinary environment in which current and future challenges of the Planet could be successfully tackled. Such science should find its role in university curricula in order to contribute to training of future generations of experts and researchers who may overcome our current limitations in understanding and managing the complexity of global challenges.

Keywords: Sustainability Science, Top-down, Bottom-up, Education

Sustainable Development from Rio 1992 to Rio+20, *Paolo Cominetti and Sergio Vergalli*

Which kind of connection exists between the Rio Conference in 1992 and Rio+20? Our article outlines the stages of a process that has been going on for twenty years, considering its strengths and weaknesses and contextualizing it according to the different economic and political scenarios that have characterized these years. Our analysis starts from the definition of «sustainable development» and the fall of the Soviet bloc in the early 90s. It continues with the Kyoto Protocol and its ratification, considering the new global equilibrium determined by the new emerging countries like China and India. Finally, it ends by presenting the Rio+20 themes: Green Economy and Poverty reduction, considering the effects of the global economic crisis of the last years.

Keywords: Rio+20, Sustainable Development, Green Economy

An Institutional Framework for Sustainable Development, *Cecilia Mezzano and Sergio Vergalli*

One of the two main themes for the Earth Summit is the «institutional framework for sustainable development». It requires agreement on plans, strategies and powers, both at global and local level, taking into account

the differences among the countries, actors and socio-economic contexts involved. Moreover, it involves rethinking strategies for an effective change of the rules of development, reconciling the requirements of economic, social and environmental issues. Rio+20 could therefore represent the opportunity for institutional actors to change the direction of development towards a sustainable one.

Keywords: Governance, Multi-level Governance, Institutional Framework, Sustainable Development, Multi-stakeholder, Rio+20

SURPLUS

Currencies and Sovereignty, *Geminello Alvi*

There is a currency crisis within the financial crunch that can lead to the breakdown of States. What was obvious yesterday, the correspondence between State and currency, is not obvious today. A very clear example is what is happening in Scotland. The independence referendum will be held very soon. If «yes» wins, what currency will the new State have? Will it join the euro, its first choice prior to its crisis, or will it retain sterling? Would the latter choice affect the political autonomy of the new State? The third option would be free banking, but it would be a radical choice.

Keywords: Euro, Sovereignty, Scotland

NATURE AS A LIMIT

For a Sustainable Earth, *Roberta Giaconi interviews Paul Hawken*

Let us imagine a city where vehicles give off only water vapor, oil is affordable, income taxes do not exist and the economy is not based on buy-

ing goods any longer, but on leasing or renting them... Is this a dream? No, it is not, according to Mr. Paul Hawken. He is not only an environmentalist, entrepreneur and journalist, but also the co-author of *Natural Capitalism*, considered by US president Bill Clinton one of the five most important books in the world. We asked him what is a Natural Capitalism and how we could build a future with the cities he describes.

Keywords: Natural Capitalism

FINANCE FOR THE CLIMATE

Update on the Status of Climate Finance, *Alessandra Gorla*

This article provides an update on the status of climate finance, commenting on the relevant outcome of the recent UNFCCC meeting in Durban, and illustrating the latest research findings on current barriers and future prospects of climate finance. Private-public partnership, innovative financial instruments, bilateral approaches, and a more balanced focus between mitigation vs adaptation, appear to be crucial to mobilize the financial resources currently needed to face the climate challenge.

Keywords: Climate Finance

GEOPOLITICS FOR ENERGY

Beyond 2020: a Look at the European Long-Term Energy Prospects, *Simone Tagliapietra*

Transforming the European energy system is imperative for reasons of climate, security and the economy. The energy infrastructures which will

power citizens' homes, industry and services in 2050 are being designed and built now, and the pattern of energy production and use in 2050 is already being set. However, today there is still an inadequate direction as to what should follow the 2020 agenda. With the recent Energy Roadmap 2050 the European Commission explored the challenges posed by delivering the EU's decarbonisation objective of reducing greenhouse gas emissions to 80-95% below 1990 levels by 2050, while at the same time ensuring security of energy supply and competitiveness. The article presents the key features of the Roadmap, showing that decarbonisation is feasible and a number of «no regret» options emerge, which can bring down emissions effectively and in an economically viable way.

Keywords: Energy Roadmap 2050, EU Energy Policy, EU Commission

Is Spring Receding and Winter Lurking in?, Ödül Celep and Volkan Aytar

This article addresses Turkey's changing role in the Middle East in this extremely volatile environment. The politics of the Middle East has been unpredictable for a long time and continued to be more so in the last few years. The bilateral and multilateral dynamics among political actors and states have changed quite quickly in the region. The current AKP government of Turkey started off with a «zero-problem with neighbors» policy in principle, but soon enough, problems arose in Turkey-Syria, Turkey-Israel and Turkey-Iran relations.

Keywords: Turkey, Democratization, Middle East

Iranet and Ahmadinejad, Yearning for the Web, Giuliano Di Caro

2012 will be the year of birth of Iranet, a broadband and censored web that will fit perfectly the needs of Iran's president Mahmoud Ahmadinejad. Iranet is going to be, to use the words picked by Iranian theocracy, a halal net, freed by obscene contents. Point is that in Iran the word «obscene» is

pretty tricky: not only actually obscene contents, but also and most of all foreign news websites, social networks, and any form of domestic opposition to Iranian regime. The rise of Irannet has been prepared by a draconian set of rules imposed to Cafe Nets: the use of VPN and proxy servers is now strictly forbidden and control on Iranian netizens got tougher. No room for opposition: Irannet (fast, advanced and fully controlled by the establishment) will be the digital and geopolitical ace that Ahmadinejad intends to play in order to empower the role of Iranian theocracy across the whole region.

Keywords: Irannet, Censored Web

New Oil Geographies. The Rise of Unconventional Oil, *Emanuele Bompan*

Unconventional oil is on the rise. OPEC estimates that production will rise to 3.4 million oil barrels per day in 2015 and over 5.8 million b/d in 2020, thanks to shale oil, ultradeep drilling and oil sands. This will also transform the geography and the geopolitics of oil, moving its center from the Middle East to new regions such as Brazil, Canada and the Antarctic region. This article features an exclusive interview with the Brazilian oil corporation Petrobras.

Keywords: Unconventional Oil, Petrobras, Canada, Oil Sand, Shale Oil, OPEC, Climate, Aramco

Digesting Bacteria to Dispose of Manure and Produce Energy, *Camilla Minarelli*

Livestock's manure can be a valuable resource or an environmental pollutant. In fact, the tons of manure excreted daily can't be always used as fertilizer because of their high nitrogen content. The solution to this problem can be in the manure itself: a waste-processing system – essentially a small power plant – installed on farms and which uses bacteria to digest the waste and burns methane to produce electricity. This process is called

anaerobic digestion, which, by definition, is a series of processes in which microorganisms break down biodegradable material in the absence of oxygen. It is used for industrial or domestic purposes to manage waste and/or to release energy. Studies have estimated that converting manure from the 95 million animal units in the United States would produce renewable energy equal to 1% of the total energy consumption in the nation. Because more and more farmers and communities are interested in generating renewable energy from farm waste, there is a growing need for information on the economic feasibility and sustainability of such programs.

Keywords: Farm Waste, Renewable Energy

VISIONS

The Everyday Future, Ughetta Molin Fop and Chiara Zanandrea

The surrealism of a non-sustainable life, a no-impact family, voices for the new generations, lives that are led according to the rhythm of nature. These are only a few hints for reflection on sustainable development, told through documentaries, artistic films and animations. A different medium to deal with this topic, the video can convey strong messages and be more moving and thought-provoking than other media.

Keywords: Surrealism, Future Sustainability

THE WORLD ON PAPER

The Nature of Europe, Franco Farinelli

Maps show more than the spoken word. Based on the elaborate graphs of an article published in the Italian daily newspaper, «Il Corriere della

sera», the author shows how the area called Europe today is located between a space that is vanishing and the increasingly complex and ambiguous diagrams that try to represent it.

Keywords: Map, Europe

INTERNATIONAL LETTERS

We Are the 99%, Sandro Malavasi

Occupy Wall Street is no longer a seasonal movement. It has gone beyond New York and Washington, spreading like wildfire throughout the United States. It cannot be compared to the European *indignados*. The protests have not decreased, although their intensity has subsided in the winter months. With the arrival of spring and the presidential elections around the corner, there are many questions that need an answer. Will the arguments raised by OWS be covered by the electoral debate? Will the movement have a role in the democrats' convention or will it become a political movement with its own candidates at the local and national elections?

Keywords: Occupy Wall Street, Indignados

The «Arab Spring», One Year Later, Daniele Atzori

One year after the Arab spring, what's the future for democracy in Arab countries? This article argues that the widespread electoral success of Islamist parties, which followed last year's protests, may not necessarily lead to the formation of liberal-democratic governments. Although the features of the new era of the Middle East and North Africa are not clear yet, some indicators seem to suggest that new and unexpected models of state are being developed.

Keywords: Arab Spring, Democracy