

BIAC COMMITTEE UPDATE

TECHNOLOGY COMMITTEE

January – December 2011

ABOUT BIAC

The Business and Industry Advisory Committee to the OECD (BIAC) was constituted in March 1962 as an independent organization officially recognized by the OECD as being representative of business and industry. BIAC's members include the industrial and employers' organizations in the OECD Member countries as well as several observers and associate expert group members.

In the framework of its consultative status with the OECD, BIAC's role is to keep the OECD informed of the private sector's response to different policy options. BIAC offers business and industry an excellent opportunity to participate in inter-governmental discussions on policy issues, thus giving the business community a chance to shape the development of long-term policies in OECD countries.

This report provides an update on selected events and activities of the BIAC Technology Committee and related activities and gives an overview of future BIAC and OECD events that are of interest to our members.

COMMITTEE leadership

CHAIR:

Botaro Hirosaki, NEC Corporation
(Japan)

VICE CHAIRS:

Richard A. Johnson, Arnold & Porter (United States)

Roland Sommer, Federation of Austrian Industry (Austria)

Karel Sperlink, Confederation of Industry of the Czech Republic

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BIAC presents its strategic vision for OECD work on science, technology and innovation

The global science, technology and innovation (STI) landscape continues to change rapidly. Increasingly, STI policies are the drivers that enable us both to lay the groundwork for sustainable economic growth and to provide the basis for addressing national, regional and global priorities.

At the October 2011 meeting of the Committee for Scientific and Technological Policy (CSTP), Dr. Hirosaki, Chair of the BIAC Technology Committee, presented BIAC's strategic vision for OECD's work on Science, Technology, and Innovation to the OECD. In the paper, BIAC underscored its support for the current work by the DSTI and made suggestions on which STI policies the OECD should put emphasis, taking into account key trends and developments that are transforming research, innovation, business models and government policies.

In light of these developments, BIAC urged a forward-looking agenda for the future program of work and for the OECD's longer-term strategic vision. Key considerations recommended by BIAC included:

- Problem-oriented and solutions-driven science and technology convergence in a global context;
- Reflecting transformations in 21st Century Science and Technology, including the emergence of big data and Internet of things;
- New sources of growth, recognizing the importance of intellectual assets for value creation, while at the same time underlining the importance of next-generation sustainable manufacturing;
- The importance of policy coherence, policy coordination, increased collaboration, as well as close

cooperation with major non-member economies;

- The provision of an enabling policy framework that fosters innovation and entrepreneurship, and that encourages the uptake of innovation and the diffusion of technology.

BIAC encouraged the OECD to put due emphasis on problem-oriented and solution-driven STI policies, pro-active policy making based on the analysis of transformations in STI, cross-cutting global cooperation to address global challenges effectively, policy coherence and coordination as well as a coherent and integrated approach to public science.

To access the paper, please [CLICK HERE](#).

Green Growth and Innovation

On the occasion of the May 2011 Ministerial Council Meeting, the OECD issued its final recommendations on the Green Growth Strategy, which was launched by OECD Ministers in 2009. One of BIAC's key messages, which our experts consistently highlighted, was the overarching importance of innovation for green growth. BIAC was successful in ensuring that the importance of innovation across sectors was prominently highlighted in the final recommendations to Ministers.

The following four reports were published on the occasion of the Ministerial Council Meeting in May:

- [Towards Green Growth](#)
- [Tools for Delivering on Green Growth](#)
- [Towards Green Growth: Monitoring Progress- OECD Indicators](#)
- [Towards Green Growth: A summary for policy makers](#)

To access the BIAAC background paper, which was prepared for the February conference and which includes a section on innovation, please [CLICK HERE](#).

Innovation for Development

In light of the OECD Development Strategy, the OECD Directorate for Science, Technology and Industry (DSTI) has launched a new initiative on “Innovation for Development” and held a first workshop on this issue on 11 October 2011. The project is intended to capture the concept of “inclusive development” and facilitate the development of innovation systems in the context of emerging and developing economies.

BIAAC took part in the workshop and expressed its interest in actively participating in future work that DSTI will carry out. Further work is intended to help emerging and developing economies foster innovative businesses, which is essential for national competitiveness on international markets.

The main themes discussed for future work were: the contribution of innovation to economic growth and well-being; the impact of globalization on development and innovation; inclusive innovation; education, skills and human capital; ICTs for development; institutional frameworks for innovation policy.

Financing for R&D and Innovation

While overall R&D spending has been on the increase over the past decades, the current economic climate, in particular the Euro zone crisis, raises concerns about adverse effects of R&D spending in the years to come. In particular for SMEs, access to financing is one of the most pressing issues. Public-private partnerships are viewed as one of the ways to address financial bottlenecks by

sharing risk and finance between the public and private sectors.

It was in this context that in December the OECD organized a workshop on financing R&D and innovation in the current macro-economic context. The workshop aimed at identifying current and future trends in R&D investment and take stock of the conditions and characteristics of these investments. BIAAC was represented by experts from different sectors and provided several speakers.

Some of the key issues discussed at the workshop included: business angels as financing sources; “creative destruction”; diffusion of jobs and investment; smart-grids for the future; and the need for change in tax and spending structure. During the discussion on the way forward, skills matching and possible collaboration with other Committees, such as the Environment and Education Committees, were also suggested.

Participants underlined the importance of keeping up financing on R&D and innovation, despite the difficult economic situation. Investments should not only target technologies and infrastructures, but also human capital.

The next workshop of the Working Party on Innovation and Technology Policy (TIP) will be held on 25 June 2012 in Paris, France.

Global Forum on the Knowledge Economy

On 12-13 September 2011, the OECD organized the first “Global Forum on the Knowledge Economy: Better Innovation Policies for Better Lives” in Paris. With a total of 265 participants, including participants from non-OECD member countries, the forum focused on the role that science and innovation policies should play in fostering growth and sustainable development. The forum also provided a platform for exchange

and networking among governments, business and civil society groups.

BIAC was represented by an important business delegation as well as several speakers, including Mr. Rick Johnson, Vice-Chair of the BIAC Technology Committee, Dr. Gernot Klotz of CEFIC, and Mr. Yuichiro Kawamura of the Japan Intellectual Property Association (JIPA), who presented the WIPO Green program. The objective of WIPO Green, which has been launched at the initiative of JIPA and Japanese BIAC members, are the accelerated adaptation, adoption and deployment of environmental technologies, particularly in developing countries and emerging economies. WIPO Green provides access to a broad range of technological solutions and acts as a focal point where prospective users can obtain relevant information and learn about new technologies in specific areas.

Discussions at the forum focused on improving national science and innovation policies, science and innovation for inclusive development, green innovation and collaboration among private and public sectors, including emerging and developing economies through inclusive development.

For further information on the Global Forum, please [CLICK HERE](#).

BIAC participates in the first Green Manufacturing Summit in India

On 17-18 March 2011, the Confederation of Indian Industry (CII), with the support of OECD and BIAC, organized its “1st Green Manufacturing Summit” in New Delhi. Bringing together close to 300 high-level representatives of Indian and international business, including BIAC members, the Indian government, the OECD as well as other key experts, the Summit provided an excellent platform for a constructive discussion on green manufacturing and

complemented Indian efforts of promoting the country as a green manufacturing location. The first session included a keynote address by the Minister of Commerce and Industry of the Government of India. BIAC nominated several international business speakers, including Dr. Makoto Yokozawa, Vice-Chair of the BIAC ICCP Committee.

India is increasingly embracing the concept of sustainability, which has become a major trend in the manufacturing industry and which, with the right policy framework in place, can create new business opportunities. The Summit allowed for interactive discussions in several areas, including: green manufacturing as a business trend; impacts on competitiveness; the role of regulation and implementation; innovation in products and processes; managing greenhouse gas emissions and improving energy efficiency; as well as the role of IT infrastructure and technologies in green manufacturing. To enrich the discussions, a number of case studies were presented from a range of different sectors, including, among others, steel, cement, automobile, electronics, IT, energy, and fertilizers.

In the framework of OECD work on green growth, BIAC has consistently underlined that the success of the OECD Green Growth Strategy will depend on the active involvement of major non-member economies, bearing in mind that “greening” of growth is needed throughout the world.

Technology convergence: challenges and opportunities

Technology Convergence has become a major topic among scientists, university and research institute leaders and policy makers, who see it as a potentially transformational trend in the way in which science is conducted and the benefits of science are

delivered to society. However, there is still a lack of clarity around how much science, technology and innovation is based on convergence of technologies, how critical this is, or how different the issues convergence raises might be from “traditional” technology development.

Richard Johnson, Vice-Chair of the BIAC Technology Committee, participated as a speaker in the thematic discussion on technology convergence, which took place in the context of the OECD CSTP meeting in March. Issues discussed in this context included, among others, statistics and measurement, funding models for research, commercialization, human resource issues and research evaluation.

New sources of growth: intangible assets

In March, BIAC contributed to discussions on proposed new OECD work on new sources of growth, which will focus on the role of intangible assets in growth and the associated policy implications. Value creation in the global economy is increasingly linked to intangible assets such as design, R&D, organizational know-how, the management of complex systems and the combination of software with hardware.

However, intangible assets still remain poorly measured, and policies for their development and exploitation are not yet well understood. Building on previous work in this area, the new project aims to provide structured evidence of the economic value of intangible assets as a new source of growth and to improve the understanding of current and emerging challenges for policy.

Fostering the development of knowledge markets

Over the past years, the circulation of knowledge has intensified and expanded to include new actors. This has resulted in the emergence of a variety of new commercial, pre-commercial and non-commercial arrangements, such as global value chains, knowledge networks, IP markets, open innovation, collaborative mechanisms for access to knowledge, etc. Building on previous work in this area, further work has been proposed focusing on the following work streams: conceptual frameworks, taxonomies and review of the statistical evidence; economic and social significance of knowledge networks and markets; the impact on innovation and economic performance; as well as analysis of policy implications.

Roland Sommer, Vice-Chair of the BIAC Technology Committee, participated as a panelist in the OECD Workshop on Knowledge Networks and Markets in June, providing business input to the future OECD research agenda in this area as well as further work on financing, transferring and commercializing knowledge.

OECD sustainable manufacturing toolkit

The OECD Manufacturing Toolkit is designed to help businesses, particularly supply chain firms and small and medium-sized enterprises (SMEs), develop a more sustainable approach for growth. It is intended to enable firms to make the most of green growth opportunities by:

- Making their operations more efficient
- Reviewing the materials they acquire for production
- Rethinking their products’ benefits and challenges

- Driving continuous improvement in their teams

In this respect, measuring performance is an indispensable first step. The toolkit provides a set of internationally applicable, common and comparable indicators to measure the environmental performance of manufacturing facilities. The indicators were developed through a two-year stakeholder consultation process, in which BIAC was actively involved.

For further information on the OECD toolkit, please [CLICK HERE](#).

New BIAC nanotechnology vision paper issued

Nanotechnologies are likely to offer a wide range of benefits in different sectors and will be important for addressing a range of global challenges. However, unlocking this potential will require a responsible and coordinated approach to ensure that potential challenges are being addressed at the same time as the technology is developing. Recognizing the important role of nanotechnology, BIAC issued a new version of its vision paper in November 2011. To access the vision paper, [CLICK HERE](#).

The OECD Working Party on Nanotechnology (WPN) advises policy makers on emerging policy issues of science, technology and innovation related to the responsible development of nanotechnology. During the first half of this year, BIAC has continued its active participation in a range of activities, including: nanomedicine, nanotechnology in food and medical products, nanotechnology for energy, as well as further work on the role of nanotechnology in the context of green growth.

BIAC puts forward project on tires and nanotechnology

As a pro-active contribution to the OECD work on nanotechnology, the tires industry has submitted through BIAC a proposal for an OECD case study on the use of nanotechnology for tires, which will be carried out as a horizontal project of the Working Party on Manufactured Nanomaterials and the Working Party on Nanotechnology, which will focus on the science, innovation and economic aspects of the use of nanotechnology in tires. The project will contribute to the wider understanding of issues regarding sustainable growth and the responsible development of nanotechnology through tires.

It is expected that significant improvements can be made utilizing new nanomaterials along with improvements in supporting technologies. Some of the benefits that are expected include, for example, providing greater safety by improvement in tire grip and decreased vehicle stopping distance; further reductions in fuel consumption and CO2 emissions; production of lighter, stronger tires leading to reduction in raw material demands; and reducing the numbers of scrap tires.

Biotechnology

Recognizing the importance of fundamental research for biotechnology, the OECD Directorate for Science, Technology and Industry (DSTI) provides major input to discussions on how to advance basic research on biotechnology and its applications.

In the area of industrial biotechnology, BIAC contributed, among others, to discussions on the development of an outlook for industrial biotechnology and the role of industrial biotechnology to address climate change. The OECD Working Party on Biotechnology

has also developed a Draft Council Recommendation on Assessing the Sustainability of Bio-based Products, which seeks to foster the objectives of stimulating innovation in bio-based industries and to boost the translation of inventions into marketable products.

In the area of health, BIAC has contributed to work on collaborative mechanisms, health research infrastructures, and regulatory policies that affect the approval and uptake of new technologies and new business models for bringing health products to market. At the initiative of BIAC experts, a project is being initiated to discuss the possibility of using Alzheimer's disease as an integrated case study through which to continue work in biomedicine and health innovation.

Innovation in energy

Innovation in the energy sector will be key to addressing the challenges of providing a secure and sustainable supply of energy. In this context, the International Energy Agency (IEA) is developing a series of global low-carbon energy technology roadmaps covering several of the most important technologies. The overall aim is to advance global development and uptake of key technologies to reach a 50% reduction in energy-related CO₂ emissions by 2050. The roadmaps identify priority actions for governments, industry, financial partners and civil society that will advance technology development and uptake to achieve international climate change goals. The following roadmaps are now available:

- Carbon capture and storage
- Cement
- Concentrating solar power
- Solar photovoltaic power
- Geothermal
- Efficient industry processes
- Electric and plug-in hybrid vehicles

- Energy efficient buildings (heating & cooling systems)
- Nuclear power
- Smart grids
- Wind energy
- Biofuels

BIAC participated in several expert workshops and submitted written comments. The IEA is now working closely with countries to support their national roadmap efforts, such as wind energy in China. The IEA has also begun work on other roadmaps for other low-carbon energy technologies, including bioenergy and high-efficiency low emissions coal technology.

For further information, please [click here](#).

UPCOMING EVENTS IN 2011

19-20 January (Denmark): The Future of Eco-Innovation: The Role of Business Models in Green Transformation

16-18 April: OECD Committee for Scientific and Technological Policy

18 April: Joint OECD CIIE/WPSMEE Workshop

19-20 April: OECD Committee on Industry, Innovation and Entrepreneurship

25-27 June: OECD Working Party on Innovation and Technology Policy

8-10 October: OECD Committee for Scientific and Technological Policy

24 October: OECD CIIE Workshop

25-26 October: OECD Committee on Industry, Innovation and Entrepreneurship

[OECD Science, Technology and Industry Scoreboard 2011](#)

This tenth edition of the OECD Science, Technology and Industry (STI) Scoreboard builds on the OECD's 50 years of indicator development to present major world trends in knowledge and innovation. It analyses a wide set of indicators of science, technology, globalisation and industrial performance in OECD and major non-OECD countries (notably Brazil, the Russian Federation, India, Indonesia, China and South Africa) and includes some experimental indicators that provide insight into new areas of policy interest.

[OECD Green Growth Studies - Fostering Innovation for Green Growth](#)

Innovation is key to green growth. It helps decouple growth from natural capital depletion and contributes to economic growth and job creation. Business is the driver of innovation, but governments need to provide clear and stable market signals, e.g. through carbon pricing. This book explores policy actions for the deployment of new technologies and innovations as they emerge: investment in research and development, support for commercialisation, strengthening markets and fostering technology diffusion. Competition will be essential to bring out the best solutions.

[Business Innovation Policies - Selected Country Comparisons](#)

This study is concerned with trends in and key features of policies and programmes used by governments to support innovation in the business sector. In addition to identifying good practices across a range of programme types, it compares business innovation policies across several countries, with a particular focus on Canada.

[Public Research Institutions - Mapping Sector Trends](#)

This publication provides new information on public research institutions (PRIs) and government strategies. Public research institutions are crucial for innovation due to their role in knowledge creation and diffusion. While absolute real expenditure on R&D in this sector has risen, it now accounts for a smaller share of total R&D spending by OECD countries and of OECD GDP.

[Intellectual Assets and Innovation – the SME Dimension](#)

This study explores the relations between SME intellectual asset management, innovation and competitiveness in different national and sectoral contexts. It provides insights on the ability of SMEs to access and utilize the protection systems available to them and identifies key challenges for SMEs in appropriating full value from IPRs. It also investigates effectiveness of regulatory frameworks and policy measures to support SME access to IPRs, identifying best practices and proposing policy recommendations.