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Berichterstattung zu strategischen Entwicklungen auf den Politikfeldern des BMBF in führenden Industrieländern

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Global

■ Rising global $C0_2$ emissions 'exceed worst-case scenario'

Global carbon-dioxide emissions are increasing more quickly than even the worst-case scenario envisaged by the Intergovernmental Panel on Climate Change, reveals a May 2007 paper by Michael Raupach, of the Australian Commonwealth Scientific and Industrial Research Organisation. Developing economies accounted for 73% of the growth in $C0_2$ emissions in 2004, representing 41% of total global carbon emissions, according to the research, published by the US National Academy of Sciences. Attempting to determine why emissions growth suddenly accelerated after 2000, Raupach concludes that the current rise in $C0_2$ emissions is due to a reduction in global efficiency, rather than population growth. Indeed, the researchers found that no part of the world reduced the amount of carbon used to produce energy between 2000 and 2004 – despite widespread publicity in support of greener sources of energy.

Meanwhile, world energy consumption is projected to grow by 57% between 2004 and 2030, according to figures released by the Energy Information Administration (EIA) of the U.S. Department of Energy – with the most rapid growth in energy demand coming from Asian nations outside the OECD. Patterns in energy demand are expected to change in the coming decades. According to the EIA, rising oil prices will dampen growth in demand for liquid fuels - including petroleum - after 2015, reducing their share of overall energy use. In contrast, the role played by natural gas, coal, and renewable energy resources is expected to grow. Global nuclear capacity is also expected to increase.However, consumption of liquid fuel will rise in real terms, reaching 118 million barrels per day by 2030, states the report. Meanwhile, the EIA indicates that coal is the fastest-growing worldwide source of energy, with consumption increasing by 2.2% annually.

Quelle

http://www.euractiv.com/en//rising-global-c02-emissions-exceed-worst-case-scenario/article-163904

Weitere Dokumente zu dem Thema

- World energy, technology and climate policy outlook 2030
  http://ec.europa.eu/research/energy/gp/gp_pu/article_1257_en.htm
- International Energy Outlook 2007 (May 2007)
  http://www.eia.doe.gov/oiaf/ieo/world.html
- World Energy Outlook 2007
  http://www.worldenergyoutlook.org/2007.asp

Weitere Informationen zu dem Thema

- New Scientist: Recent C02 rises exceed worst-case scenarios
  http://environment.newscientist.com/article/dn11899-recent-cosub2sub-rises-exceed-worstcase-scenarios.html
- U.S. Department of Energy: World Energy Use Projected to Grow 57 Percent Between 2004 and 2030
  http://www.eia.doe.gov/neic/press/press283.html
- CSIRO Marine and Atmospheric Research: Dr. Mike Raupach
  http://www.dar.csiro.au/profile/raupach.html
- DG ENVIRONMENT: Climate change homepage
  http://ec.europa.eu/environment/climat/home_en.htm

Ausführliche Themeninformationen bei internationale-kooperation.de

- Wegweiser für Energieforschung
  http://www.internationale-kooperation.de/?thema=3

Frankreich

■ Forschungsministerin Pécresse, Premierminister Fillon und Staatspräsident Sarkozy stellen die Schwerpunkte der von ihnen vertretenen Hochschul-, Forschungs- und Innovationspolitik als eine politische Priorität dar

Ministerin Pécresse traf am 24.5.2007 mit der Konferenz der Universitätspräsidenten (CPU) und den Vertretern der gewerkschaftlichen Vereinigungen der Studenten zusammen. Im Anschluß daran unterstrich sie den tiefen und auf Dauer angelegten Wandel, den die Regierung Fillon im Bereich der Universitäten anstrebe. Dieser Wandel beschränke sich nicht allein auf das geplante Gesetz über die Autonomie der Universitäten, das der Staatspräsident schon bis Ende Juni 2007 im Parlament zur Verabschiedung bringen möchte. Am 1.6.2007 hielt Premierminister Fillon vor Studenten und Forschern der Universität d' Orsay eine Grundsatzansprache. Am 5.6.2007 flocht Präsident Sarkozy seine staats- und ordnungspolitischen Vorstellungen zu Bildung, Forschung und Innovation in seine Festansprache zum Gedenken sowie zur Würdigung der Person und des Lebenswerks von Nobelpreisträger Pierre-Gilles de Gennes ein (Palais de la découverte).

Quelle

http://www.internationale-kooperation.de/de/nachricht8121.htm

Weitere Informationen zu den Reden und Statements

- Pécresse: Lancement de la concertation sur la réforme de l'enseignement supérieur
  http://www.enseignementsup-recherche.gouv.fr/discours/2007/dconcertationres.htm
- Fillon: Autonomie et gouvernance, clés de la réforme des universités
  http://www.premier-ministre.gouv.fr/information/actualites_20/autonomie_gouvernance_cles_reforme_56515.html
- Allocution de M. Nicolas SARKOZY, Président de la République, en hommage au chercheur Pierre-Gilles de Gennes
  http://www.elysee.fr/elysee/elysee.fr/francais/interventions/2007/juin/allocution_du_president_de_la_republique_en_hommage_au_chercheur_pierre-gilles_de_gennes.78360.html

Weitere Informationen zur Hochschulreform in Frankreich

- Universitätsreform Frankreichs in der entscheidenden Phase
  http://www.internationale-kooperation.de/de/nachricht8257.htm
- Staatspräsident und Forschungsministerin machen bei der geplanten Universitätsreform Konzessionen
  http://www.internationale-kooperation.de/de/nachricht8296.htm
- Premierminister Fillon erläutert in seiner Regierungserklärung den vom Ministerrat am 4.7.2007 beschlossenen Entwurf eines Gesetzes zur Reform der Universitäten
  http://www.internationale-kooperation.de/de/nachricht8331.htm
- Der Ministerrat gibt "Grünes Licht" für den Entwurf der umbenannten "loi relatif aux libertés des universités"
  http://www.internationale-kooperation.de/de/nachricht8329.htm
- Eine neue Webseite zum französischen Hochschulwesen
  http://www.internationale-kooperation.de/de/nachricht8432.htm
- Hochschul- und Forschungsministerin Pécresse unterzeichnet am 18.7.2007 den ersten Schub ("vague A") von Vierjahresverträgen (2007-2010) mit 49 Hochschulen
  http://www.internationale-kooperation.de/de/nachricht8458.htm

Ausführliche Länderinformationen bei internationale-kooperation.de

- Wegweiser für Frankreich – Bildung und Hochschulen
  http://www.internationale-kooperation.de/?land=73&thema=1

Großbritannien

■ Vereinigtes Königreich steigert internationale wissenschaftliche Zusammenarbeit

Der Bericht "Patterns of international collaboration for the UK and leading partners" (Modelle der internationalen Zusammenarbeit für das Vereinigte Königreich und führende Partner) zeigt, dass fast 40% der wissenschaftlichen Veröffentlichungen und Ergebnisse des Vereinigten Königreichs in den vergangenen Jahren eine internationale Zusammenarbeit mit einbezogen, was einer Steigerung von über 11% gleichkommt. In den vergangenen zehn Jahren hat die wachsende Zusammenarbeit mit einer Steigerung von 50% noch größere Ausmaße angenommen. Im Vergleich dazu stieg sie in Frankreich um 30%. Damit konnte das Vereinigte Königreich andere führende Forschungsländer einholen, die in der Vergangenheit relativ wenig Zusammenarbeit betrieben, heißt es in dem Bericht.

Die beliebtesten Partner des Vereinigten Königreichs waren wichtige Forschungsländer wie die USA, Deutschland und Frankreich. Insbesondere die Verbindungen zu Frankreich und Deutschland sowie die Qualität der Ergebnisse aus diesen Partnerschaften leisten wichtige Beiträge zum Wachstum des Europäischen Forschungsraums (EFR). Jedoch hat sich das Vereinigte Königreich in den jüngsten Jahren dazu entschlossen, enger mit China zusammen zu arbeiten. Im Jahr 2005 verfügte das Land über mehr gemeinsame Veröffentlichungen mit China als mit den europäischen Nachbarn. Jedoch bemerkt der Bericht auch, dass das Vereinigte Königreich es nicht geschafft hat, in einigen Forschungsbereichen seine Verbindungen zu China zu erhöhen. Ein Beispiel dafür sind die biologischen Wissenschaften, die nicht nur eine starke Seite des Vereinigten Königreichs sind, sondern ein Bereich, in dem auch China erheblich expandiert. Er schlägt vor, dass die Qualität der Partnerschaften zwischen dem Vereinigten Königreich und China in Zukunft genau beobachtet werden sollte.

Das Vereinigte Königreich wird auch selbst von anderen Ländern als ein guter Partner angesehen. Zum Beispiel bewahrt es einen größeren Anteil an US-Zusammenarbeit (12,9%) als jedes andere Land mit Ausnahme von Deutschland. Außerdem ist es in den klinischen und biologischen sowie in Gesundheits- und Umweltwissenschaften der führende Partner für die USA. Auch für Deutschland, Australien und Kanada ist es nach den USA der zweithäufigste Partner.

Quelle

http://www.internationale-kooperation.de/de/nachricht8435.htm
http://www.dius.gov.uk/pressreleases/press-release-20070712a.htm

Download des Berichts

- Patterns of international collaboration for the UK and leading partners
  http://www.berr.gov.uk/files/file40396.pdf

Die neuen Ministerien in Großbritannien

- Department for Innovation, Universities and Skills (DIUS)
  http://www.dius.gov.uk/
- Department for Business, Enterprise and Regulatory Reform (BERR)
  http://www.berr.gov.uk/

Ausführliche Länderinformationen bei internationale-kooperation.de

- Wegweiser für Großbritannien – Kooperationsvereinbarungen und -aktivitäten
  http://www.internationale-kooperation.de/?land=224&thema=31

Norwegen

■ Many more researchers needed in Norway - Researcher recruitment a top priority

A report on researcher recruitment and researcher training shows that Norway faces considerable challenges with regard to the future recruitment of researchers. The report concludes that intensive, targeted efforts will be required to reach the goals set for Norwegian research.

The report has been commissioned from NIFU STEP, the leading Norwegian research institute for studies in innovation, research, and education, by the Ministry of Research and Education and the Research Council of Norway. NIFU STEP was asked to assess the preliminary results of a national escalation plan for researcher recruitment for the period 2001-2007, and evaluate the need for further efforts in this area.

The report shows that there is a current shortage of 660 doctoral research fellows compared with targets in the escalation plan. It goes on to recommend that the Government take measures to increase the number of research fellows by 350 per year in an effort to reach the goals set for Norwegian research. Next year the Ministry plans to present a new government white paper on researcher recruitment and researcher training.

Quelle

http://www.forskningsradet.no/servlet/Satellite?c=GenerellArtikkel&pagename=ForskningsradetEngelsk/GenerellArtikkel/VisMedHovedtilhorighet&cid=1179343831052

Ausführliche Länderinformationen bei internationale-kooperation.de

- Politische Zielsetzungen für Forschung und Bildung in Norwegen
  http://www.internationale-kooperation.de/?land=162&seite=info&rubrik=politischezielsetzungen

Italien

■ Finanzielle Unterstützung für F&E in Süditalien

Die italienische Regierung hat angekündigt, die Forschung und Entwicklung (F&E) im Süden des Landes mit Fördermitteln in Höhe von 268 Millionen Euro zu unterstützen. Ziel ist die Erhöhung der Wettbewerbsfähigkeit Süditaliens. Das Ministerium für Hochschulbildung und Forschung ließ verlauten, mit den Mitteln werde die Errichtung von elf öffentlich-privaten Exzellenzzentren in der Region finanziert. Der Schwerpunkt soll hierbei auf Forschungsbereichen liegen, die über ein hohes Potenzial zur Förderung der sozioökonomischen Entwicklung Süditaliens verfügen, beispielsweise Solarenergie, Agrar- und Lebensmittelwissenschaft, Arzneimittelentwicklung, Genetik, Bioinformatik und fortschrittliche Werkstoffe.

Ferner werden die Fördermittel zur Gründung von zwölf Hochtechnologie-Clustern in acht Regionen Süditaliens eingesetzt. Ebenso wie die Exzellenzzentren sollen die Cluster Unternehmen, Universitäten und Forschungszentren zusammenbringen. Diese werden gemeinsam technologische Innovationen in mehreren Schlüsselsektoren vorantreiben, und zwar in den Bereichen Biowissenschaft, Mikroelektronik, Agrarindustrie, Nanotechnologien, innovative Produktionssysteme, E-Business, Logistik und Kulturerbe. Neben der finanziellen Unterstützung der Forschungsinfrastruktur wird die Regierung Mittel zur Ausbildungsförderung und zur Gründung von Hightech-Unternehmen bereitstellen.

Die Investitionen sollen die wirtschaftliche Ertragskraft der südlichen Regionen Italiens stärken, die immer noch hinter dem Norden des Landes zurückbleiben. Im Bereich F&E wird die wirtschaftliche Kluft zwischen dem Norden und Süden Italiens besonders deutlich: Im Jahr 2005 wurden im Norden 0,4 % des BIP in F&E investiert, während dieser Prozentsatz im Süden lediglich bei 0,2 % lag.

Quelle

http://www.internationale-kooperation.de/de/nachricht8421.htm

Ausführliche Länderinformationen bei internationale-kooperation.de

- Forschungslandschaft: Italien
  http://www.internationale-kooperation.de/?land=107&seite=info&rubrik=forschungslandschaft

EU / Europa

■ Structural funds should boost regional innovation

The European Research Advisory Board's (EURAB) report on *Energising Europe's Knowledge Triangle of Research, Education and Innovation through the Structural Funds* recommends to the Commission and the member states to take a strategic approach to the use of Structural Funds Programmes to "leverage development of regional research, innovation and higher education capacity".

The advisory board suggests a mandatory earmarking of 20% of these funds for investment in research and innovation measures and that "this condition becomes a part of the Community strategy in the implementation process of the Lisbon strategy in Europe". Among its other recommendations (nine in total), EURAB proposes the establishment of a dedicated platform by a joint action from all Commission's directorate generales (DGs) involved in the implementation of the research-education-innovation aspects of the the Lisbon Strategy. This platform would "develop and spread best practice on the use of Structural Fund programme expenditure to stimulate the regional economic benefits of research and innovation, particularly in overcoming existing disparities across the EU".

Quelle

http://www.euractiv.com/en/science/structural-funds-boost-regional-innovation/article-164112

Download des Berichts

- EURAB report
  http://ec.europa.eu/research/eurab/pdf/eurab_07_010_advice_energising_europe_knowledge_triangle_april07_en.pdf

European Research Advisory Board's (EURAB)

- Link zum EURAB bei internationale-kooperation.de mit Übersicht zu weiteren Informationen
  http://www.internationale-kooperation.de/de/einrichtung3422.htm

■ Studie: Mobilität von Wissenschaftlern noch immer gering

Ein Bericht von Eurostat über die Mobilität von Arbeitskräften in den Bereichen Wissenschaft und Technologie hat ergeben, dass durchschnittlich 5,7% der in diesen Bereichen Tätigen innerhalb der EU-27 Staatsangehörige eines anderen Landes seien, wovon die Hälfte Unionsbürger seien. Die Statistiken, die im Juni 2007 veröffentlicht wurden, zeigen, dass es große Unterschiede in Hinblick auf den Anteil dieser hoch qualifizierten Kräfte in verschiedenen EU-Staaten gibt.

Die Anteile der Arbeitskräfte in den Bereichen Wissenschaft und Technologie schwanken zwischen 46% in Luxemburg und 0,3% in Slowenien. Der Anteil der ausländischen Kräfte liegt im Vereinigten Königreich bei 7,2%, in Deutschland bei 6,4% und in Frankreich bei 4,1%. In den neuen Mitgliedstaaten, mit Ausnahme von Estland (15,2%) und Zypern (14,2%), ist der Prozentsatz ausländischer Wissenschaftler sehr gering: er beläuft sich auf etwa 1% oder weniger.

Im Jahr 2005 hat die Kommission eine Empfehlung über die Europäische Charta für Forscher und einen Verhaltenskodex für deren Einstellung angenommen. Den Forschern sollen langfristige Berufsaussichten ermöglicht werden, indem bessere Bedingungen für deren Mobilität geschaffen werden. Dies dient gleichzeitig der Unterstützung der EU-Wettbewerbsfähigkeit. Die Charta verleiht den einzelnen Forschern die gleichen Rechte und Pflichten, wo auch immer in der EU sie arbeiten. Für Arbeitskräfte in den Bereichen Wissenschaft und Technologie aus Nicht-EU-Staaten, die insgesamt etwa 3% aller Tätigen in diesen Bereichen in Europa darstellen, wurden Maßnahmen eingeführt, die spezifische Verfahren beinhalten, um ihren Eintritt in die EU und die dortige Arbeit zu erleichtern.

Diese Statistiken und Umfragen weisen darauf hin, dass die Initiativen der Kommission, die bessere Bedingungen für die Mobilität der Forscher schaffen sollen, bisher keine klaren Ergebnisse zeigen. Der Aufbau des europäischen Forschungsraums und des Binnenmarktes für Forscher ist noch immer ein fortdauernder Prozess. Eine Befragung über den zukünftigen europäischen Forschungsraum wurde im April 2007 gestartet.

Quelle

http://www.internationale-kooperation.de/de/nachricht8451.htm

Download des Berichts

- How mobile are highly qualified human resources in science and technology?
  http://epp.eurostat.ec.europa.eu/cache/ITY_OFFPUB/KS-SF-007-075/EN/KS-SF-007-075-EN.PDF

Weitere Dokumente und Informationen

- Europäische Charta für Forscher - Verhaltenskodex für die Einstellung von Forschern
  http://www.eubuero.de/arbeitsbereiche/wissenschaftundgesellschaft/charta/Download/dat_/fil_1601
- Befragung über den zukünftigen europäischen Forschungsraum
  http://ec.europa.eu/research/era/consultation-era_en.html

■ Professionalising knowledge transfer - An overview of the knowledge-transfer activities in Europe

The European-funded project, *ProTon Europe*, analysed the knowledge-transfer activities carried out by the special Knowledge Transfer Offices affiliated to European Public Research Organisations. The survey concludes that there is an urgent need to professionalise the activities of these offices.

The offices' main knowledge-transfer activities consist of interaction with industry and that most of the offices' knowledge-transfer deals and revenues are related to this type of activity. The activity includes different forms of interaction with industry (collaborative research, contract research and consultancy), IPR protection, licensing and spin-out creation. The survey conclusions also show that European knowledge-transfer outputs related to patents (disclosures, filings, licences) are small compared with the United States. This is, according to the authors, due to the absence of an efficient and easily-accessible patent system in Europe.

Quelle

http://www.protoneurope.org/news/FY2005survey

Download des Berichts

- Summary Report of the Fiscal Year 2005 ProTon Europe Survey
  http://www.protoneurope.org/reports/plonearticle.2007-07-17.1512284263

Weiteres Dokument zu dem Thema

- Experiences on the US knowledge transfer Report
  http://www.protoneurope.org/reports/plonearticle.2007-07-17.2021360787

■ Competitiveness of the EU Mechanical Engineering Industry

The EnginEurope report is the outcome of a High-Level Discussion Group which was formed in early 2006 with the mandate to identify and analyse the major challenges affecting the sector, and to assess the framework conditions under which the sector operates.

Quelle

http://ec.europa.eu/enterprise/mechan_equipment/engin/study.htm

Download des Berichts

- EU Engineering Competitive Update (July 2006)
  http://ec.europa.eu/enterprise/electr_equipment/engin/engineer_compet_2006.pdf

Weitere Dokumente zu dem Thema

- Introduction to the Mechanical and Electrical Engineering Sectors of new EU Member States (November 2005)
  http://ec.europa.eu/enterprise/mechan_equipment/engin/mech_elec_newms.pdf
- Machinery and Equipment Industries in the EU (Eurostat 2003)
  http://ec.europa.eu/enterprise/mechan_equipment/eurostatde.pdf

■ Bericht bietet Tipps für einen erfolgreichen Biotechnologiesektor

Geld und Größe allein reichen nicht aus, um die Entwicklung eines starken Biotechnologiesektors zu fördern, heißt es in einem neuen Bericht der Europäischen Kommission. Erwerb von Wissen, Technologietransfer, Koordinierung, ein umweltfreundliches Klima und eine unternehmerische Tradition sind mindestens ebenso wichtig. Der Bericht ist das Ergebnis der BioPolis-Initiative, die im Jahr 2004 mit dem Ziel eingeleitet wurde, nationale Biotechnologiepolitiken in ganz Europa zu vergleichen und gegenüberzustellen. Ein früherer Bericht zu demselben Thema deckte 17 westeuropäische Länder ab. Diesmal betrachteten die Forscher alle 27 Mitgliedstaaten sowie die Schweiz, Norwegen und Island und die Bewerberländer Kroatien und die Türkei.

Quelle

http://www.internationale-kooperation.de/de/nachricht8476.htm

Übersichtsseite mit Downloadmöglichkeit des Endberichts und der einzelnen Länderberichte

- BioPolis Final report and National reports
  http://ec.europa.eu/research/biosociety/library/brochures_reports-biopolis_en.htm

USA

■ National Science Foundation publishes new Large Facilities Manual

NSF makes awards to external entities – primarily universities, consortia of universities or nonprofit organizations – to undertake construction, management and operation of facilities. Such awards frequently take the form of cooperative agreements. With the sole exception of NSF's facilities in Antarctica, for which the Foundation acquires construction, operating and maintenance services, NSF does not directly construct or operate the facilities it supports. However, NSF "has overall responsibility for NSF-funded awards, including providing award oversight for technical and programmatic, and financial and administrative performance."

This Manual is intended to:

- provide step-by-step guidance for NSF staff and awardees to carry out effective project planning, management, and oversight of large facilities, recognizing that different kinds of projects may require different approaches;
- clearly state the policies, requirements, and recommended procedures pertinent at each stage of a facility's life cycle – from conception to construction/acquisition, operations, renewal, and/or phase-out and termination; and
- document the practices identified over many years that enable NSF program officials to ensure accountability and carry out their responsibilities more effectively.

Ranking criteria for prioritizing projects are:

- First Ranking: Scientific and Technical Criteria Assessed by Researchers in a Field or Interdisciplinary Area
- Second Ranking: Agency Strategic Criteria Assessed Across Related Fields
- Third Ranking: National Criteria Assessed Across All Fields

Quelle

http://www.nsf.gov/pubs/2007/nsf0738/nsf0738.pdf

Ausführliche Länderinformationen bei internationale-kooperation.de

- Forschungslandschaft: USA
  http://www.internationale-kooperation.de/?land=226&seite=info&rubrik=forschungslandschaft

■ Technology Innovation and Manufacturing Stimulation Act approved

The approved House committee bill H.R. 1868, the Technology Innovation and Manufacturing Stimulation Act, authorizes $2.5 billion for NIST programs in 2008, 2009, and 2010. H.R. 1868 repeals the law authorizing ATP and replaces it with a new Technology Innovation Program (TIP). The bill language states: *"There is established in the Institute a Technology Innovation Program for the purpose of assisting United States businesses and institutions of higher education or other organizations, such as national laboratories and nonprofit research institutes, to accelerate the development and application of challenging, high-risk technologies that promise widespread economic benefits for the Nation."* TIP single company grants for small and medium-sized business are limited to $3 million over three years for direct costs and are not to exceed 50 percent of total project costs (and can be extended at no additional cost if Congress is notified.) Provision is made for joint venture grants limited to $9 million over five years, with the federal contribution capped at 50 percent. Ongoing ATP grants would continue.

Quelle

http://www.aip.org/fyi/2007/050.html

Weitere Informationen zu dem Thema

- Senate Passes Major S&T Bill
  http://www.aip.org/fyi/2007/044.html
- House Passes NSF Authorization Bill
  http://www.aip.org/fyi/2007/048.html

Weiteres Dokument zu dem Thema

- Statement of Administration Policy
  http://www.whitehouse.gov/omb/legislative/sap/110-1/hr1868sap-r.pdf

■ Research and Development Activities of U.S. Multinational Companies: Educated Workers Keep U.S. Competitive in Corporate R&D

A new benchmark survey from the U.S. Bureau of Economic Analysis (BEA) finds that while India and China remain the fastest-growing hosts of multinational research, many companies have elected to increase their domestic research presence. BEA's Daniel Yorgason reports that, as of 2004, 85 percent of all R&D spending by U.S. multinational companies funded domestic research. This represents a 2 percent drop since 1999; however, domestic R&D expenditures have still grown substantially in recent years. At multinational parents in the U.S., R&D spending rose by more than $26 million between 1999 and 2004, while spending on majority-owned foreign affiliates rose by $9 million.

Total R&D spending at U.S. multinationals appears to be rebounding from its slump earlier this decade. Multinational R&D spending had peaked in 2001 at $142 billion before declining

slightly after the worldwide recession. In 2004, however, R&D spending jumped by more than $19 billion, reminiscent of the rapid growth that occurred in the late 1990s. The majority of this increased spending was directed toward domestic research.

The study confirms that multinational R&D is becoming more broadly dispersed. Multinational firms are spending less on overseas R&D in the top host countries, and the number of countries hosting U.S. R&D rose from 66 to 77. The United Kingdom, Germany, Canada, France, Japan, and Sweden now host 65 percent of U.S. foreign-affiliate research, down from 72 percent in 1999. More than half of the growth in U.S. foreign R&D expenditures between 1999 and 2004 was invested in Europe. Overall, however, Europe's share of U.S. R&D declined slightly during that period.

India and China both experienced significant gains in U.S. R&D investment, but still receive much less than many European countries. Between 1999 and 2004, R&D expenditure in India jumped from $20 million to $163 million and China's almost doubled from $319 million to $622 million. Asian and Pacific countries overall, however, remained relatively stabile in their role in U.S. research, receiving about 18 percent of investment throughout that period.

Canada also became more vital to U.S. corporate research over the early part of this decade. Between 1999 and 2004, R&D employment at Canadian affiliates more than doubled. Canada is the only host within the top six countries for U.S. foreign research that saw an increase in its share of U.S. foreign R&D. The country now receives more than 10 percent of U.S. overseas R&D expenditure.

Quelle

http://www.bea.gov/scb/toc/0307cont.htm

Download des Berichts

- Research and Development Activities of U.S. Multinational Companies
  http://www.bea.gov/scb/pdf/2007/03March/0307RDofMNCs.pdf

■ Patent Reform Bill Would Raise the Stakes for Small Business IP Practices

The U.S. patent system has long been an outlier in its approach to protecting intellectual property (IP) rights. While every other industrialized country awards IP protection to the first party to apply for a patent, the U.S. system bases its IP decisions on the first inventor of a particular technology. As foreign markets have become more important to high-tech companies seeking to go global from day one, this approach has complicated the country's ability to enter into international agreements that would protect the IP rights of U.S. firms around the globe.

In recent years, legislators and industry groups have attempted to harmonize U.S. patent laws with the first-to-file systems used in Europe and Asia. For the third session in a row, Congress is considering a reform package that would put an end to the first-to-invent system and, this time, some change seems more likely to pass. The Patent Reform Act of 2007 would bring U.S. patent regulation more in line with the IP policies of other nations and close many of the perceived loopholes left by previous overhauls of the patent system.

Though the first-to-invent system is frequently depicted as an odd anachronism within U.S. patent law, the system has offered some additional protections for smaller businesses. By protecting the original inventor of a new technology instead of the first filer, the first-to-invent system helped to ensure that inventors would not be denied profit from their work simply because another party beat them to the patent office. Filing for patents can be a complex and expensive process that favors larger companies with IP experts on staff.

Quelle

http://www.ssti.org/Digest/2007/060607.htm#Patent

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- California Healthcare Institute
  http://www.chi.org/news/patent_white_paper_053107.aspx

Kanada

■ Canada Releases New National Science and Technology Strategy: Mobilizing Science and Technology to Canada's Advantage

With the recent release of a national science and technology strategy, Canada becomes the latest developed nation to outline specific steps to maintain its competitive position. *Mobilizing Science and Technology to Canada's Advantage* centers on themes to encourage more private R&D and concentrates federal research support in the areas of natural resources, the environment, health and information technology. The strategy follows up on the government's November 2006 release of Advantage Canada, a report that recognizes the competitive strengths of the Canadian people and infrastructure and emphasizes the necessity to do more to create innovation and spur improvement.

The emphasis on private R&D investment is supported by various statistics illustrating Canada's current position. In 2005, the strategy observes, only 54 percent of the $27 billion of the R&D performed in Canada in 2005 originated from the private sector (note: all figures are in Canadian dollars). Comparatively, this is well below the average of countries in the Organisation for Economic Cooperation and Development (OECD), where private sector R&D averages 68 percent of total expenditures. Among the G7 nations, Canada has the highest ratio of public R&D investment to national gross domestic product (GDP). But when the private sector is factored in, total R&D spending is only 2 percent of GDP, less than most of the G7 economies. The report concludes too that Canada's private sector "does not provide enough incentives for students to strive for advanced S&T and business management skills."

Policy recommendations are organized into three categories: a collection of steps to ameliorate Canada's entrepreneurial advantage, its knowledge advantage, and its people advantage. Some of the highlights of these recommendations include:

Entrepreneurial Advantage

- Provide $350 million over three years to establish eight large-scale centers of research and commercialization in distinct priority areas.
- Provide $48 million over five years for a program to support more college-industry partnerships.
- Establish the lowest tax rate on new investments by businesses among the G7 nations.
- Adapt the Canada-U.S. Tax Treaty to allow Canadian entrepreneurs improved access to U.S. venture capital.

Knowledge Advantage

- Invest in priority research with $85 million per year in new research ventures, allocating $500 million for developing next-generation renewable fuels, $100 million for Genome Canada, and $30 million for spinal cord research.
- Provide $510 million to build state-of-the-art research infrastructure at higher education institutions before 2010.
- Provide $120 million to maintain and further develop research broadband networks.

People Advantage

- Beginnings in 2008-09, invest an additional $800 million in the Canadian postsecondary education system, increasing 3 percent per year thereafter.
- Support up to 1,000 interns per year in government positions through a new industrial R&D internship program.
- Provide $35 million the next two years, then $27 million afterwards, for the government to support an additional 1,000 graduate students each year.

Quelle

http://ic.gc.ca/cmb/welcomeic.nsf/vRTF/PublicationST/$file/S&Tstrategy.pdf

Weitere Informationen zu dem Thema

- Prime Minister Releases National Science and Technology Strategy to Strengthen Canada's Economy
  http://www.ic.gc.ca/cmb/welcomeic.nsf/af913527c10aeb6a852564820068dc6c/85256a5d006b9720852572de0050d959!OpenDocument
- Minister Bernier Announces First Steps in Putting New Science, Technology and Innovation Council in Place
  http://www.ic.gc.ca/cmb/welcomeic.nsf/ddb0aecf65375eb685256a870050319e/85256a5d006b9720852572fa005fd494!OpenDocument

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- Politische Zielsetzungen für Forschung und Bildung in Kanada
  http://www.internationale-kooperation.de/?land=37&seite=info&rubrik=politischezielsetzungen

■ Why Do Manufacturing Firms Choose to Collaborate on Innovative Projects? Motives for Co-operation: Evidence from the Canadian Survey of Innovation

A recent discussion paper from the Center for European Economic Research sheds new light on the motives of collaborative firms. In *Motives for Co-operation: Evidence from the Canadian Survey of Innovation,* Tobias Schmidt develops a typology of these firms, differentiated by their reasons to engage in collaboration.

What's new about Schmidt's research is the tool he uses to explore the relationship between these motives (to share costs or to access external knowledge, for example) and the descriptive factors (size, industry type, educational attainment of employees, for example) of these firms. Much of the previous research in the field has used proxy measures to explore the motives of firms. But Schmidt utilized a direct question about firm motives that was included in Canada's 2005 Survey of Innovation, a question that has not been featured in many past national innovation surveys from around the globe.

Quelle

http://www.zew.de/de/publikationen/publikation.php3?action=detail&nr=3322

Download des Berichts

- Motives for Innovation Co-operation – Evidence from the Canadian Survey of Innovation
  ftp://ftp.zew.de/pub/zew-docs/dp/dp07018.pdf

Weitere Informationen zu dem Thema

- How do innovative manufacturing establishments acquire knowledge and technology: Findings from the 2005 Survey of Innovation
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Japan

■ Japanese Government's S&T-related Budget Request – JFY2007 Decrease by 1.8 Percent

The Japanese Government's total S&T-related budget for Japan Fiscal Year 2007 (April 1, 2007-March 31, 2008) is expected to be **Yen 3,511.3 billion** ($29.8 billion @Yen 118/$), a decrease of 1.8 percent from JFY2006. If it is viewed by ministry/agency, the budget requested by MEXT (Ministry of Education, Culture, Sports, Science and Technology) dominates 65.9 percent of the whole S&T-related budget requests. When viewed by the nature of the budget, Yen 507.1 billion ($4.37 billion) is for "Strategically Important Science and Technology," Yen 576.2 billion ($4.97 billion) is for "Competitive Research Funds," and Yen 212.4 billion ($1.83 billion) is for Personnel Fostering and Security.

Major new projects or projects to be expanded include the following:

- World Top-level Research Centers Yen 7.6 billion ($65.5 mil.)
- Target Protein Research Program Yen 7.4 billion ($63.8 mil.)
- Space Transportation System Yen 44.4 billion ($382.7 mil.)
- Fast Breeder Reactor Yen 35.1 billion ($302.6 mil.)
- Commercialization of Innovation Yen 11.3 billion ($97.4 mil.)
- Science Education Yen 6.0 billion ($51.7 mil.)

Ministry/Agency	JFY2006 S&T-related Budget	JFY2007 S&T-related Budget	Change (%)
Ministry of Education, Culture, Sports, S&T (MEXT)	2,303.7	2,577.3	0.4
METI: Ministry of Economy, Trade and Industry (METI)	558.1	560.4	-9.8
Defense Agency	183.6	160.0	-14.3
Ministry of Health, Labour, and Welfare (MHLW)	130.8	149.1	0.6
Ministry of Agriculture, Forests, and Fisheries (MAFF)	120.9	152.6	6.6
Ministry of Land, Infrastructure, and Transportation (MLIT)	78.5	88.0	0.1
Ministry of Internal Affairs and Communications (MIC)	74.9	81.3	-2.4
Cabinet Secretariat	61.2	65.6	2.7
Ministry of Environment (MOE)	28.9	37.2	8.6
Cabinet Office	15.8	17.6	2.7
Ministry of Foreign Affairs (MOFA)	11.0	11.5	4.9
Policy Agency	2.2	2.3	-0.9
Ministry of Justice	2.1	2.2	-3.4
Ministry of Finance (MOF)	1.6	1.6	-3.8
Diet	1.1	1.4	5.2
TOTAL	3,574.3	3,511.3	-1.8

Quelle

http://www.nsftokyo.org/rm07-01.pdf

Weitere Informationen zu dem Thema

- ITB Info-Service - 22. Januar 2007: Japanese Government's S&T-related Budget Request – JFY2007 Increase by 9.3 Percent
  http://www.internationale-kooperation.de/doc/info_07_01_22_1815.pdf

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  http://www.internationale-kooperation.de/?land=111&seite=info&rubrik=politischezielsetzungen

■ Major Projects in the Japanese Government JFY2007 S&T-related Budget

Programs and projects individually reviewed by the Council for Science and Technology Policy (CSTP) account for Yen 1.5 trillion of the total Japanese Government S&T-related budget request of Yen 3.5 trillion ($29.8 billion) forwarded for Diet approval for Japanese fiscal year 2007 (April 1, 2007-March 31, 2008). As one of four policy councils within the Prime Minister's Cabinet Office, the CSTP oversees development of the Japanese Government's Science and Technology Basic Plan.

For JFY2007, CSTP reviewed 386 individual projects/programs, and the funding requests for those projects represent 43 percent of the total S&T-related budget request forwarded to the Diet. The majority of reviewed projects were designated in the ministry/agency funding requests as being under one of the S&T Basic Plan "Priority Areas" (Life Science, Information Technology, Environment, and Nanotechnology/Materials) or "Promotion Areas" (Energy, Manufacturing Technologies, Social Infrastructure, and Frontier).

- Under **Life Science**, "Translational Research" will serve as a bridge between basic research and clinical research, with a goal of making good use of basic research results forward clinical applications. MEXT and METI/NEDO will receive new budgets for Translational Research of Yen 1,500 million ($12.7 million) and Yen 1,900 ($16.1 million), respectively.

- In the Priority Area of **Information Technology**, MEXT's budget for the "Frontier/Advanced all-purpose supercomputer program" will be more than doubled from the previous year's Yen 3,547 million ($30.1 million) to Yen 7,736 million ($65.6 million). The goal of this program is to develop a "world-level next-generation supercomputer." Also noteworthy under this Priority Area are the new METI projects on "Information Navigation Project" of Yen 4,570 million ($38.7 million) and "Intelligent Technologies for Next-generation Robots" of Yen 1,900 million ($16.1 million).

- In the Priority Area of **Environment**, JAXA's project on GOSAT (Greenhouse Gases Observation Satellite) will receive a budget increase from Yen 4,930 million ($42 million).

Under the category of "University-related programs," **MEXT's Center of Excellence (COE)** programs are noteworthy. The 21st Century COE program established a total of 274 COEs in 2002-2004, with funding of about Yen 130 million ($1.1 million)/year per project for five years. The goal of the program is to cultivate a competitive academic environment among Japanese universities by giving targeted support to the creation of world-standard research and education bases. Since no new 21st Century COEs are being funded, the program budget will decrease from Yen 37,800 million ($320.3 million) in JFY2006 to Yen 22,016 million ($186.6 million) in JFY 2007.

Quelle

http://www.nsftokyo.org/rm07-03.pdf

Weitere Informationen zu dem Thema

- Japanese Government's Science and Technology Basic Plan
  http://www.nsftokyo.org/rm06-02.pdf

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- Politische Zielsetzungen für Forschung und Bildng in Japan
  http://www.internationale-kooperation.de/?land=111&seite=info&rubrik=politischezielsetzungen

■ Japan's New International Large-scale Research Centers Programs

One of the pillars of Japan's Third Science and Technology Basic Plan (2006-2010) is to "reform S&T systems," including (1) providing more opportunities for young researchers to conduct independent research, (2) attracting foreign researchers to work in Japan, (3) making research environments more competitive, and (4) fostering personnel in science and technology so they can excel in diverse fields. Japan's Ministry of Education, Culture, Sports, Science and Technology (MEXT) started in JFY2007 (April 2007-March 2008) two new research centers programs:

- **World Premier International Research Center Initiative (WPI)**
  WPI expects to support about five world-top class research centers in Japan at a level of Yen 500 million - 2 billion ($4-17 million) per center per year for 10 (and possibly 15) years. The total budget for WPI in JFY2007 is Yen 3.5 billion, which will support selected centers for their first six months starting in October 2007. WPI centers will be expected to have 200 or more staff, including researchers, research assistants, and administrative staff. Among a center's researchers, 10-20 of them should be "world-top level researchers," 10-20 percent should be "excellent foreign researchers," and 30 percent or more (including short-term fellows) should be "foreign researchers." Post-docs will be recruited by international solicitation. The working language at WPI centers will be English, and both researchers and administrative staff should have English language capability. Universities, inter-university institutions, independent administrative organizations, and public corporations can apply for WPI grants. The competition will be administered by the Japan Society for the Promotion of Science (JSPS).

- **Global COE Program (Global COE)**
  Global COE will support new academic research centers with start-ups over the next five years at a level of Yen 50-500 million per center per year for five years. The total budget for Global COE in JFY2007 is Yen 15.8 billion, which will support approximately 60 new centers. Depending on future year budgets, MEXT expects to support an additional 60 new Global COE's in JFY2008, and 10 additional new centers each year in JFY2009, 2010 and 2011. Because it follows after the "21st Century COE Program" that established a total of 272 research centers at 91 Japanese universities between 2002-2004, Global COE is being referred to as a "post 21st Century COE Program." Global COE places more importance on support for young researchers and on internationalization. Doctoral departments or programs in university graduate schools and research institutes attached to universities can apply for Global COE grants. The competition, which is administered by JSPS, has already received 281 applications, and JFY2007 grants are expected to be announced in May.

Quelle

http://www.mext.go.jp/b_menu/houdou/19/03/07032805.htm
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- Global COE Program
  http://www.jsps.go.jp/english/e-globalcoe/index.html
- World Premier International Research Center Initiative
  http://www.jsps.go.jp/j-toplevel/data/01_koubo/02_koubo_e.pdf
  http://www.mext.go.jp/b_menu/houdou/19/03/07032805/018.pdf

■ Recommendations on Japan's International Cooperation Policy and Expectations on the new Japan International Cooperation Agency

Nippon Keidanren released its "Recommendations on Overseas Economic Cooperation and Modalities of International Financial Operations" in June 2006. In May 2006, the government inaugurated the Council of Overseas Economic Cooperation chaired by the prime minister as the command center of Japan's ODA (Official Development Assistance) policy. And in August 2006, the Ministry of Foreign Affairs established a new International Cooperation Bureau with a view to strengthen its planning and policy-initiating capability on international cooperation. The government has also formally decided to set up a new Japan International Cooperation Agency (JICA) in October next year as the organ in charge of implementing ODA by merging it with the yen loan department of the Japan Bank for International Cooperation (JBIC). The non-ODA business of the JBIC will become the international finance arm of the Japan Policy Finance Corporation. (The department will be known in English by its old name, the Japan Bank for International Cooperation.) Nippon Keidanren takes this opportunity to reiterate its views on the four major areas of Japan's international cooperation policy.

The Council of Overseas Economic Cooperation: the Command Center
Nippon Keidanren has always argued that there must be a command center for ODA policy. They appreciate the reform that has led to the establishment of an ODA command center in the form of the Council of Overseas Economic Cooperation chaired by the prime minister. Since members of the council are made up exclusively of Cabinet members, it is important to promote economic cooperation through policy measures by the Ministry of Foreign Affairs as well as various other ministries and agencies and aid implementing organizations, with actions based on the basic principles as spelled out by the council.

The new JBIC
Nippon Keidanren hopes that the new Japan Bank for International Cooperation (the international finance arm of the Japan Policy Finance Corporation) will make full use of its expertise in international finance and, as an effectively independent body, will play a greater role in backing the international operations of Japanese businesses.

The new JICA
Nippon Keidanren has argued that the operation of the three schemes of Japan's ODA program - technical assistance, grant-in-aid and loan assistance (yen loans) - must be coordinated in an organic manner. The new JICA should make this possible. Debate is being conducted on how to integrate the two constituent organizations, and this provides an excellent opportunity to carry out a complete organizational makeover. In addition to providing human resources training and humanitarian aid, the new JICA should put priority on economic and social infrastructure aid in order to foster economic growth in the aid-recipient countries. They also look forward to systemic changes (such as halving the length of time from the point when a yen-loan project is authorized to the start of construction work) to underscore the merits of setting up a new ODA-implementing agency.

The ODA budget
With respect to the ODA budget, they should clearly realize that international cooperation is a Japanese obligation to the international community, and they should strive to maintain the scale of the ODA program at a certain level. Nippon Keidanren should also send a clear message to peoples at home and abroad that Japan will continue to make contributions to the world through ODA.

The year 2008 will be important for Japan to lay out what it will do in international cooperation: apart from the birth of the new JICA in October, the Tokyo International Conference for African Development will take place in May, and Japan will host the Group of Eight Summit at Lake Toya in Hokkaido in July. Nippon Keidanren takes this opportunity to offer the following recommendations on Japan's international cooperation and to spell out its expectations on the new JICA on some practical matters in line with the fundamental principles outlined above.

- Assistance to spur economic growth and the importance of the private sector as a leading player.
- Expanding ODA projects and making effective use of funds from repayment of yen loans.
- Assistance for securing resources and energy supply and resolving global environmental problems.
- Providing assistance to Africa as a member of the international community.
- The use of ODA as a means for promoting and strengthening economic partnerships.
- Review the policy of aid through international agencies.
- Promote understanding of Japan's aid policy in the international community.

Quelle

http://www.keidanren.or.jp/english/policy/2007/040.html

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- Japan Bank for International Cooperation
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- Japan's ODA
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