

## 参考文献

- Abe, H., Katayama, A., Sah, B.P., Toriu, T., Samy, S., Pheach, P., Adams, M.A. & Grierson, P.F. 2007. Potential for rural electrification based on biomass gasification in Cambodia. *Biomass and Bioenergy*, 31(9): 656–664.
- Aglionby, J. 2008. Indonesia faces dispute over biofuels fields. *Financial Times*, 11 February. Available at: [www.ft.com/cms/s/0/aea8136e-d8b1-11dc-8b22-0000779fd2ac.html](http://www.ft.com/cms/s/0/aea8136e-d8b1-11dc-8b22-0000779fd2ac.html)
- Biofuelwatch. 2007. *Agrofuels: towards a reality check in nine key areas*. Available at: [www.biofuelwatch.org.uk/docs/agrofuels\\_reality\\_check.pdf](http://www.biofuelwatch.org.uk/docs/agrofuels_reality_check.pdf)
- Bowyer, J.L. & Stockmann, V.E. 2001. Agricultural residues: An exciting bio-based raw material for the global panels industry. *Forest Products Journal*, 51(1): 10–21.
- Broadhead, J.S., Bahdon, J. & Whiteman, A. 2001. *Past trends and future prospects for the utilisation of wood for energy*. Global Forest Products Outlook Study Working Paper No. 5. FAO, Rome.
- Butler, R.A. 2007a. Is peat swamp worth more than palm oil plantations? *Jakarta Post*, 22 August. Available at: [news.mongabay.com/2007/0717-indonesia.html](http://news.mongabay.com/2007/0717-indonesia.html)
- Butler, R.A. 2007b. *Indonesian palm oil industry tries disinformation campaign*. 8 November. Available at: [news.mongabay.com/2007/1108-palm\\_oil.html](http://news.mongabay.com/2007/1108-palm_oil.html)
- Carrere, R. 2001. Oil-palm: the expansion of another destructive monoculture. In *The bitter fruit of oil-palm: dispossession and deforestation*. London, UK, World Rainforest Movement.
- Colchester, M., Jiwan, N., Andiko, Sirait, M., Firdaus, A.Y., Surambo, A. & Pane, H. 2006. *Promised land: palm oil and land acquisition in Indonesia – implications for local communities and indigenous peoples*. Forest Peoples Programme, Sawit Watch, HuMA and the World Agroforestry Centre. Available at: [www.forestpeoples.org/documents/prv\\_sector/oil\\_palm/promised\\_land\\_eng.pdf](http://www.forestpeoples.org/documents/prv_sector/oil_palm/promised_land_eng.pdf)
- EIA (Energy Information Administration). 2007. *International Energy Outlook 2007*. Washington, DC, USA. Available at: [www.eia.doe.gov/oiaf/ieo/index.html](http://www.eia.doe.gov/oiaf/ieo/index.html)
- EIA. 2008. *Petroleum Navigator*. Washington, DC, USA. Available at: [tonto.eia.doe.gov/dnav/pet/pet\\_pri\\_spt\\_s1\\_d.htm](http://tonto.eia.doe.gov/dnav/pet/pet_pri_spt_s1_d.htm)
- European Union. 2007. *Promoting biofuels as credible alternatives to oil in transport*. Press release, 10 January. Brussels, Belgium. Available at: [europa.eu/rapid/pressReleasesAction.do?reference=MEMO/07/5](http://europa.eu/rapid/pressReleasesAction.do?reference=MEMO/07/5)
- Faaij, A.P.C. 2003. Bioenergy in Europe: changing technology choices. *Energy Policy*, 34(3): 322–342.
- FAO. 1997. *FAO provisional outlook for global forest products consumption, production and trade to 2010*. Rome.
- FAO. 2000. *The energy and agriculture nexus*. Environment and Natural Resources Working Paper No. 4. Rome.

- FAO. 2004. *Unified bioenergy terminology*. Available at: [www.fao.org/DOCREP/007/j4504E/j4504e00.htm#TopOfPage](http://www.fao.org/DOCREP/007/j4504E/j4504e00.htm#TopOfPage)
- FAO. 2006a. *Impact of an increased biomass use on agricultural markets, prices and food security: a longer-term perspective*, by J. Schmidhuber. Prepared for the International Symposium of Notre Europe, Paris, 27–29 November 2006. Available at: <http://www.fao.org/es/esd/BiomassNotreEurope.pdf>
- FAO. 2006b. *Responsible management of planted forests: voluntary guidelines*. FAO Planted Forests and Trees Working Paper FP37E. Rome.
- FAO. 2006c. *Global Forest Resources Assessment 2005 – Progress towards sustainable forest management*. FAO Forestry Paper No. 147. Rome.
- FAO. 2007a. Bioenergy homepage. Rome, Natural Resources Management and Environment Department. Available at: [www.fao.org/nr/ben/ben\\_en.htm](http://www.fao.org/nr/ben/ben_en.htm)
- FAO. 2007b. *State of the World's Forests*. Rome. Available at: [www.fao.org/forestry/sofo](http://www.fao.org/forestry/sofo)
- FAO. 2007c. FAOSTAT database. Rome. Available at: [faostat.fao.org](http://faostat.fao.org)
- Fargione, J., Hill, J., Tilman, D., Polasky, S. & Hawthorne, P. 2008. *Land Clearing and Biofuel Carbon Debt*, Scienceexpress. Available at: [www.sciencexpress.org](http://www.sciencexpress.org)
- Fresco, L.O. 2006. *Biomass for food or fuel: Is there a dilemma?* Amsterdam, the Netherlands, University of Amsterdam.
- Global Insight. 2007. *The biofuels boom: A multi-client study*. Waltham, Massachusetts, USA.
- GRAIN. 2007. The new scramble for Africa. *Seedling*, Agrofuels special issue. Barcelona, Spain.
- Hillring, B. 1997. Price trends in the Swedish wood-fuel market. *Biomass Bioenergy*, 12(1): 41–51.
- Hooijer, A., Silvius, M., Wösten, H. & Page, S. 2006. *Assessment of CO<sub>2</sub> emissions from drained peatlands in South-east Asia*. Delft Hydraulics report Q3943. Delft, the Netherlands, Delft Hydraulics.
- IATP (Institute for Agriculture and Trade Policy). 2007. *Patents: taken for granted in plans for a global biofuels market*. Minneapolis, Minnesota, USA. Available at: [www.iatp.org/iatp/publications.cfm?refid=100449](http://www.iatp.org/iatp/publications.cfm?refid=100449)
- IBDF (Instituto Brasileiro de Desenvolvimento Florestal). 1979. *Sumário da viabilidade econômica-financeira da produção de etanol à partir da madeira*. Brasília, Brazil.
- IEA (International Energy Agency). 2003. *Background paper: coal industry advisory board meeting with IEA Governing Board*, 10 December. Paris, France. Available at: [www.iea.org/textbase/papers/2003/ciab\\_demand.pdf](http://www.iea.org/textbase/papers/2003/ciab_demand.pdf)
- IEA. 2004. *World Energy Outlook 2004*. Paris, France.
- IEA. 2006. *World Energy Outlook 2006*. Paris, France.
- IEA. 2007a. *Renewables in global energy supply*. Paris, France. Available at: [www.iea.org/textbase/papers/2006/renewable\\_factsheet.pdf](http://www.iea.org/textbase/papers/2006/renewable_factsheet.pdf)
- IEA. 2007b. *World Energy Outlook 2007*. Paris, France.
- IPCC (Intergovernmental Panel on Climate Change). 2007. *Climate change 2007 – the physical science basis*. Contribution of Working Group I to the Fourth Assessment Report of the IPCC. Cambridge, UK, Cambridge University Press. Available at: [www.ipcc.ch/ipccreports/ar4-wg1.htm](http://www.ipcc.ch/ipccreports/ar4-wg1.htm)

- ITTO (International Tropic Timber Organization). 2002. *ITTO guidelines for the restoration, management and rehabilitation of degraded and secondary tropical forests*. ITTO Policy Development Series No. 13. Yokohama, Japan.
- ITTO. 2005. *Increase in efficiency in conversion of tropical timber and utilization of residues from sustainable sources*. PD 61/99 rev. 4(I). Yokohama, Japan.
- Karlsson, Å. & Gustavsson, L. 2003. External costs and taxes in heat supply systems. *Energy Policy*, 31: 1541–1560.
- Knoef, H. A. M. 2000. The UNDP/World Bank monitoring program on small scale biomass gasifiers (BTG's experience on tar measurements). *Biomass & Bioenergy*, 18(1): 39–54.
- Liu, Y. 2007 *Chinese biofuels expansion threatens ecological disaster*. Washington, DC, USA, Worldwatch Institute. Available at: [www.worldwatch.org/node/4959](http://www.worldwatch.org/node/4959)
- Lugo, A.E., Brown, S. & Chapman, J. 1988. An analytical review of production rates and stemwood biomass of tropical forest plantations. *Forest Ecology and Management*, 23(2–3): 179–200.
- Mabee, W.E. & Roy, D.N. 2001. Fuelwood – an overview. In *A compendium of plant and animal life-cycle and their impact on the environment*, Vol. 2, pp. 310–317. Calcutta, India, Srebhumi Publishing Company.
- Mabee, W.E. & Saddler, J.N. 2007. *Forests and energy in OECD countries*. Forests and Energy Working Paper No. 1. Rome, FAO. Available at: [www.fao.org/forestry/energy](http://www.fao.org/forestry/energy)
- NAS (National Academy of Science). 1980. *Firewood crops: shrub and tree species for energy production*. Washington, DC, USA. Unpublished.
- NRDC (Natural Resources Defense Council). 2006. *Ethanol: energy well spent – a survey of studies published since 1990*. New York, USA, NRDC and Climate Solutions. Available at: [www.nrdc.org/air/transportation/ethanol/ethanol.pdf](http://www.nrdc.org/air/transportation/ethanol/ethanol.pdf)
- Perley, C. 2008. *The status and prospects for forestry as a source of bioenergy in Asia and the Pacific*. Bangkok, Thailand, FAO Regional Office for Asia and the Pacific.
- Peskett, L., Slater, R., Stevens, C. & Dufey, A. 2007. Biofuels, Agriculture and poverty reduction. *Natural Resource Perspectives 107*. London, UK, Overseas Development Institute. Available at: [www.odi.org.uk/Publications/nrp/NRP107.pdf](http://www.odi.org.uk/Publications/nrp/NRP107.pdf)
- Prasad, B. 2007. *Role of Indian agricultural cooperatives in development for biofuels*. Presented at the FAO/Regional Network for Development of Agricultural Cooperatives (NEDAC) regional workshop *Role of Agricultural Cooperatives in Bio-Fuel Development at Community-Level for Rural Food and Livelihood Security*, Bangkok, Thailand, 4–7 July.
- Risø – National Laboratory for Sustainable Energy. 2003. *Risø energy report 2*. Roskilde, Denmark, Risø Technical University of Denmark.
- Rosegrant, M.W., Msangi, S., Sulser, T. & Valmonte-Santos, R. 2006. Biofuels and the global food balance. In P. Hazell & R.K. Pachauri, eds. *Bioenergy and agriculture: promises and challenges*. 2020 Focus No. 14. Washington, DC, USA, International Food Policy Research Institute (IFPRI).
- Rosegrant, M.W., Ringler, C., Msangi, S., Cline, S.A. & Sulser, T.B. 2005. International model for policy analysis of agricultural commodities and trade (IMPACT-WATER): Model description. Washington, DC, USA, IFPRI.

- Searchinger, T., Heimlich, R., Houghton, R.A., Dong, F., Elobeid, A., Fabiosa J., Tokgoz, S., Hayes, D. & Yu, T.H. 2008. Use of U.S. croplands for biofuels increases greenhouse gases through emissions from land use change. *Science*, 319: 1238-1240.
- Spitzer, J. & Jungmeier, G. 2006. *Greenhouse gas emissions of bioenergy systems*. Presented at the European Conference on Bioenergy Research, Helsinki, Finland, 19–20 October.
- STCP Data Bank. 1983–. STCP Engenharia de Projetos Data Bank. Curitiba, Brasil.
- Steierer, F., Fischer-Ankern, A., Francoeur, M., Wall, J. & Prins, K. 2007. *Wood energy in Europe and North America: a new estimate of volumes and flows*. Geneva, Switzerland, UNECE/FAO, 6 February. Available at: [www.unece.org/trade/timber/docs/stats-sessions/stats-29/english/report-conclusions-2007-03.pdf](http://www.unece.org/trade/timber/docs/stats-sessions/stats-29/english/report-conclusions-2007-03.pdf)
- Tomaselli, I. 1982. Liquidification of wood. In W.R. Smith, ed. *Energy from forest biomass*. Proceedings of the XVII IUFRO World Congress Energy Group. New York, USA, Academic Press.
- Tomaselli, I. 2007. Forests and energy in developing countries. Rome, FAO.
- Trømborg, E., Buongiorno, J. & Solberg, B. 2000. The global timber market: implications of changes in economic growth, timber supply, and technological trends. *Forest Policy and Economics*, 1(1): 53–69.
- UNECE (United Nations Economic Commission for Europe). 2007. Timber Committee price database. Geneva, Switzerland. Available at: [www.unece.org/trade/timber/mis/fp-stats.htm](http://www.unece.org/trade/timber/mis/fp-stats.htm)
- UNECE/FAO. 2006. *Forest Products Annual Market Review, 2005–2006*. Geneva, Switzerland. Available at: [www.unece.org/trade/timber/docs/fpama/2006/fpamr2006.htm](http://www.unece.org/trade/timber/docs/fpama/2006/fpamr2006.htm)
- UNECE/FAO. 2007. *Forest Products Annual Market Review, 2006–2007*. Geneva, Switzerland. Available at: [www.unece.org/trade/timber/docs/fpama/2007/fpamr2007.htm](http://www.unece.org/trade/timber/docs/fpama/2007/fpamr2007.htm)
- UN-Energy. 2007. *Sustainable bioenergy: a framework for decision makers*. Available at: [www.fao.org/docrep/010/a1094e/a1094e00.htm](http://www.fao.org/docrep/010/a1094e/a1094e00.htm)
- US Department of Energy. 2008. *U.S. department of energy selects first round of small-scale biorefinery projects for up to \$114 million in federal funding*. Press release. Available at: [www.energy.gov/news/5903.htm](http://www.energy.gov/news/5903.htm)
- WHO (World Health Organization) Europe. 2006. Health risks of particulate matter from long-range transboundary air pollution. Copenhagen, Denmark, WHO Regional Office for Europe. Available at: [www.euro.who.int/document/E88189.pdf](http://www.euro.who.int/document/E88189.pdf)
- Wolf, M. 2007. Biofuels: a tale of special interests and subsidies. *Financial Times*, 30 October. Available at: [www.ft.com/cms/s/0/40a71f96-8702-11dc-a3ff-0000779fd2ac.html?nclick\\_check=1](http://www.ft.com/cms/s/0/40a71f96-8702-11dc-a3ff-0000779fd2ac.html?nclick_check=1)
- Worldwatch Institute. 2007. *Biofuels for transport: global potential and implications for sustainable energy and agriculture*. London, UK, Earthscan.
- WTO (World Trade Organization). 2004. International trade statistics. Geneva, Switzerland.
- Wu, C. Z., Huang, H., Zheng, S. P. & Yin, X. L. 2002. An economic analysis of biomass gasification and power generation in China. *Bioresource Technology*, 83(1): 65–70.

## 森林与能源

### 主要问题

能源消费量和矿物燃料价格的飙升以及不断增加的温室气体排放量和对能源进口依存度的关注，正在促使人们寻找矿物燃料的替代品来进行能源生产。生物燃料是目前地球上生产的可再生能源的最大来源。作为生物量，木材提供一些最高水平的能源和碳效率。本出版物对森林与能源之间的关系进行了探讨。它论述了木材在目前和未来对生物能源生产的贡献，以及液体生物燃料作物的开发对森林影响。本文件从一开始对全球能源供应和需求进行了概述并对到2030年的情况作出预测。随后在有关各种生物能源作物及其在第一代和第二代生物燃料生产中的应用的一般性讨论中，论述了木质能源的贡献。所作分析对开发生物能源不同来源的好处和转变土地用途的风险作出了评价。它还讨论了市场力量为促进木质能源生产而不断进行的技术创新。提出了旨在发展生物能源的政策选择和建议，强调了土地使用综合规划和监测以及向发展中国家转让先进的木材能源技术的重要性。本出版物对于有兴趣了解更多关于森林在能源生产方面作用的特定和普通读者均将有裨益。

Forests and Energy: Key Issues

ISBN 92-5-505985-8

ISSN 1999-2882



9 789255 059858

TC/M/10139Ch/1/05.08/100