

## DFID funds bio-energy programme in Africa, Asia

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A five-year research project to help deliver sustainable and affordable energy to the poor in Africa and Asia. The African Centre for Technology Studies (ACTS) and other collaborating partners in Africa and Asia have launched a five-year research programme on energy. The programme is funded by the UK's Department for International Development (DFID). The Policy Innovation Systems for Clean Energy Security, PISCES is led by the African Centre for Technology Studies, (ACTS), a Nairobi-based science, technology and environmental policy intergovernmental organization that generates new knowledge through policy analysis and outreach. ACTS is partnering with Practical Action Consulting, M.S.Swaminathan Research Foundation (MSSRF), the University of Dar es Salaam and the University of Edinburgh, together with a network of national and international partners and collaborators. According to Prof Judi Wakhungu, the Executive Director of ACTS, the objective of PISCES is to produce policy-relevant information and approaches that can be applied by governments in developing the role of bioenergy in delivering energy access for the poor. She said PISCES is focused on bioenergy – incorporating biomass from natural sources, biowaste streams from agriculture and industry, and biofuels from purpose grown energy crops – that has resonated with an increasingly polarised international debate. That debate, she says, centres on whether and how humanity should find more of our energy from bioenergy sources, and how that pathway might affect the poor and the environment. The Inception Workshop was held in Nairobi from September 26-29 and was attended by governments, donors, International Organisations, NGOs, companies and universities. Participation in initial consultations has come from across the regions of focus in Kenya, Tanzania, South India and Sri Lanka. Currently 2.5 billion people still rely on bioenergy in the form of firewood for basic energy services. According to Wakhungu, there is exploding global interest and activity in the growing of energy crops for the production of biofuels. While increased cultivation of energy crops could provide increased energy access for the poor, without appropriate policies in place it could easily pass them by or even damage their livelihoods. She says that at the macro-level, bioenergy has the potential to increase global energy supplies without increasing carbon emissions. At the local level it could absorb vital water supplies and fertile land needed to cultivate food. It is against this backdrop of unprecedented global interest in bioenergy that PISCES will integrate research on water, food, energy and environmental security, with a focus on the role of bioenergy in increasing energy access and security of livelihoods for the poor without degrading the climate and environment. The new and existing technologies, including plant varieties, processes, appliances and practices, that are required if bioenergy is to power sustainable development will be analysed, developed and tested. The circular and dynamic relationships between the climate and environment, and bioenergy production and consumption, will be investigated and evaluated. PISCES will also be looking at the socio-economic studies and market analysis aimed at determining types of structures, incentives and regulations that could create and sustain access and delivery of bioenergy to poor people. The programme hopes to build a networked centre of expertise, bringing together experts and policymakers who are to bring these and other strands of research together and, crucially, into use. The Kenyan permanent secretary for energy, Mr. Patrick Nyoike, in his opening address at for the PISCES Inception Workshop, underlined the need for research into the realization of affordable and reliable energy with a particular focus on bio-mass energy. The opening speech was read for him by the chief economist at the ministry, Mr. Wilfred M. Deche. The permanent secretary said in part: According to the PS, next to food, fuel represents the most important expenditure for poor households, yet the poor face limited, inefficient and expensive energy options to meet their heating and lighting needs. Most rural villagers in Africa depend predominantly on bio-mass to meet their modest energy needs largely due to widespread poverty. Fuel wood, he said are used together with crop residue and dung for cooking. These traditional fuels, as presently used, have inherent disadvantages. "Collection is arduous and is also known to cause acute respiratory problems when combustion takes place in kitchens with limited ventilation. In addition, the uncontrolled use of bio-mass energy has been closely associated with climate variability with adverse Implications for hydro energy and food production", he said. Several policy reforms have been put in place to enable Kenya's ministry of energy to effectively fulfil its mandate. These include the Poverty Reduction Strategy Paper, the Economic Recovery Strategy for Wealth and Employment Creation, Sessional Paper No.4 of 2004 on Energy, the Energy Act of 2006 which became operational on 7th July 2007 and vision 2030. All these policy documents recognize the pivotal role that provision of quality and clean energy services play in the country's social-economic transformation. Kenya is endowed with significant amounts of renewable energy resources such as wind, solar, geothermal, small hydro and biomass. With exception of biomass which account for 68 per cent of the national primary energy consumption and large hydro power projects, little efforts have been expended towards the exploitation of these other renewable energy resources which if harnessed, can play a significant role in the country's energy supply mix. According to the PS, the bio-fuels offer cost-effective and sustainable opportunities with the potential to meet 50 per cent of the world energy demands in the next century and at the same time meet the requirements of reducing carbon emission from fossil fuels Bio-fuels sources such as agricultural crops, biomass residues and wastes provide about 14 per cent of the world's primary energy supplies. A task force has been set up to prepare a strategy for development of bio-diesel which will in future be replicated for other forms of bio-energy.