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World News

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Africa & Asia

U.S. scientists recently released a report showing that crops in Southern Asia and Africa will likely be the worst affected by climate change. Equally as important, the research showed that the people in these regions utilize the likely affected crops for a majority of their calorie intake, increasing the likelihood of mass-malnutrition and starvation.[1] The most affected crops include millet, groundnuts, rapeseed, and wheat in Asia, and sorghum and maize in Africa.[2] To increase research and investment into developing foods that can withstand climate change, the Gates Foundation has announced that it will grant $19.9 million to the International Rice Research Institute ("IRRI") to develop rice species to fill the role.[3] IRRI will develop a strain of rice that is resistant to floods, droughts, and salty water, and distribute it to 400,000 farmers in needy areas.[4]

Americas

On January 30th, the U.S. Department of Energy ("DOE") quit supporting the FutureGen project in Mattoon, Illinois because of predicted cost overruns and other concerns.[5] FutureGen was to be a near zero emission coal plant and a prototype for the next generation of clean-coal plants around the world.[6] Its goal was to convert coal into flammable hydrogen, which would power electric turbines, and carbon dioxide would have been sequestered underground.[7] In response to the growing estimated costs, $1.8 billion, the consortium of private companies working on FutureGen with the government offered to split any overrun costs, however, the DOE acknowledged that costs were not the only issues.[8] A report from MIT highlighted that a single power plant could not provide all the trials that clean coal sequestration requires.[9]

With the United States relying on coal fired power plants for over half of its electricity, experts believe it is necessary for the United States to discover uses of coal that do not result in large releases of carbon dioxide.[10] The DOE hopes to receive comments on clean coal sequestration technology and then build multiple plants like the previously proposed FutureGen, without the previous issues of cost overruns and burdensome federal rules.[11]

Europe

Norway plans to cut its greenhouse gas emissions to nearly nine percent below 1990-levels by 2012 and become carbon neutral by 2030.[12] This is twenty years sooner than Norway's announcement last year of going carbon neutral by 2050.[13] Norway plans to drop their emissions to forty-five million tons from their current production of fifty-eight million by 2012. However, scientists in Norway point out that there are very few planned cuts in emissions.[14] In fact, Norway's greenhouse gas emissions are expected to increase in the coming years because of a growing dependence on gas and oil for energy.[15] Norway currently gets much of its energy from its hydroelectric stations, but plans to increase natural gas use to satisfy growing demand.[16] While Norway does plan to force industry to purchase quotas on Norwegian markets, that will only decrease production by an expected 9.7 million tons.

The remaining cuts are expected to come from the purchase of carbon credits via the U.N.'s Clean Development Mechanism ("CDM"), and the planting of forests.[17] The Norwegian plan includes spending more than $550 million a year on reforestation efforts around the world. Under the Kyoto Protocol, countries can only get CDM credits for planting trees in developing countries.[18] Many groups have criticized the plan as vague and impossible, but Norwegian officials say that the far sighted goals are necessary and liken reaching the carbon neutral goal to the environmental equivalent of landing on the moon.[19]

Middle East

The United Arab Emirates ("UAE") is planning to build the world's first carbon neutral city, Masdar City, in the desert outside of the UAE capital of Abu Dhabi. Work has already begun on the massive project which is slated to open in 2016 and is expected to cost $22 billion.[20] The government has put up $4 billion for the project with the rest financed by private enterprise looking to make money from the carbon credits.[21] Masdar City will use solar collection for power, be one hundred percent car free, with full waste recycling, and use seventy percent less energy and fifty to sixty percent less water than conventional cities.[22] Masdar City hopes to use both rooftop solar panels as well as large concentrated solar power ("CSP") outside the city for all their power needs.[23] CSP is different from traditional photovoltaic solar cells because it uses mirrors to focus heat from the sun to produce power and is ideal for hot desert climates like in the UAE.[24]

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Polar Regions

New research is showing that the ability of trees to act as a carbon sink for the world may be decreasing as climate change increases. The higher temperatures created by climate change are beginning to alter the carbon cycle of trees taking in carbon through photosynthesis and then releasing it when they decompose or burn.[25] Until recently, it was believed that climate change would spur greater growth in plants, at least initially, because of the increased growing season, thereby increasing their carbon uptake. This increased growth is already evident and can be seen from space. However, a research group monitoring forests in thirty northern polar regions for the past twenty years has shown that increased carbon uptake has not followed the increased growth.[26] Their research focused on the autumn months when most forests release more carbon than they take in because of decomposition. The research shows that autumn is coming earlier in the year, in some cases as much as a few weeks, meaning that the forests are producing much more CO_2 than previously expected.[27] Although the net effect of this finding is still not known, forest adaptation or the forestation of areas currently covered in tundra could make up for the extra CO_2.[28]

Endnotes: World News

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[3] Chen Weixiao, *Gates Foundation boost for climate-hardy rice*, SciDev.Net, Feb. 4, 2008, *available at* http://www.scidev.net/dossiers/index.cfm?fuseaction=dossierreaditem&dossier=4&type=1&itemid=4216&language=1 (last visited Mar. 1, 2008).

[4] Weixiao, *supra* note 3.

[5] Rebecca Smith & Stephen Power, *After Washington Pulls Plug on FutureGen, Clean Coal Hopes Flicker*, Wall St. J., Feb. 2, 2008, at A7; *Clean Coal: Up in Smoke*, Economist, Feb. 2, 2008, at 42 [hereinafter *Up in Smoke*].

[6] Smith & Power, *supra* note 5, at A7; *Up in Smoke*, *supra* note 5, at 42.

[7] *Up in Smoke*, *supra* note 5, at 42.

[8] Smith & Power, *supra* note 5, at A7; *Up in Smoke*, *supra* note 5, at 42.

[9] *Up in Smoke*, *supra* note 5, at 42.

[10] Smith & Power, *supra* note 5, at A7.

[11] *Up in Smoke*, *supra* note 5, at 42.

[12] Alister Doyle, *Norway's climate goals seen relying on quotas*, ENN, Feb. 12, 2008, *available at* http://www.enn.com/climate/article/31025 (last visited Mar. 21, 2008).

[13] John Acher & Camilla Bergsli, *Norway says aims to go carbon neutral by 2030*, ENN, Jan. 17, 2008, *available at* http://www.enn.com/top_stories/article/29456 (last visited Mar. 21, 2008).

[14] Doyle, *supra* note 12.

[15] Doyle, *supra* note 12.

[16] Acher & Bergsli, *supra* note 13.

[17] Doyle, *supra* note 12.

[18] Acher & Bergsli, *supra* note 13.

[19] Acher & Bergsli, *supra* note 13.

[20] Bryan Walsh, *Zero-carbon city leads UAE climate push*, Time, Feb. 13, 2008, *available at* http://www.time.com/time/specials/2007/article/0,28804,1712863_1712864,00.html (last visited Mar. 21, 2008).

[21] Walsh, *id.*

[22] Walsh, *id.*

[23] *Renewable Energy: Desert Dreams*, Carbon News, Feb. 13, 2008, *available at* http://www.carbonpositive.net/viewarticle.aspx?articleID=992 (last visited Mar. 21, 2008).

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[25] *Trees Are Not The Answer To Climate Change*, ENN, Jan. 3, 2008, *available at* http://www.enn.com/climate/commentary/28571 (last visited Mar. 30, 2008).

[26] *Trees Are Not The Answer To Climate Change*, *id.*

[27] *Trees Are Not The Answer To Climate Change*, *id.*

[28] *Trees Are Not The Answer To Climate Change*, *id.*