**S1 Table. Source data descriptions and access.** Descriptions of data sources used to locate unexploited or potential resources and/or proportions of land predicted to be modified to support future development.

|  |  |  |
| --- | --- | --- |
| **Threat Category** | **Data Distribution and Access**  *Dataset Name*:   * Data Provider * Dataset Link or Method Accessed * Date Accessed * Citation number associated with bibliography below table | **Data Description**  *Dataset Name*:   * Data Type * Scale or Resolution * Resource values used in analysis * Data reference year |
| Urban expansion | *Urban expansion forecast to 2030*:   * Yale University’s Seto Lab * <http://urban.yale.edu/data> * Accessed: 02/12/2014 * Citation: [1] | *Urban expansion forecast to 2030*:   * Type: Raster * Resolution: 5 km * Value: Probability of expansion * Reference Date: 2012 |
| Agriculture expansion | *Historic Cropland and Pasture 2000 -2011:*   * McGill University’s Land Use and the Global Environment Lab * Personal Contact * Accessed: 04/15/2014 * Citation: Unpublished update to [2] | *Historic Cropland and Pasture 2000 - 2011:*   * Type: Raster * Resolution: 5 arc minute (~10km) * Value: Proportion of cell cropland and pasture * Reference Date: 2000 - 2011 |
| Conventional oil and gas | *2000 World Petroleum Assessment - Geologic Provinces of the World*   * *US Geologic Survey (USGS)* * [*http://certmapper.cr.usgs.gov/data/wep/dds60/wep\_prvg.zip*](http://certmapper.cr.usgs.gov/data/wep/dds60/wep_prvg.zip) * *Accessed: 09/21/13* * *Citation: [3]*   *2012 World Petroleum Assessment – Province Summary*   * *US Geologic Survey (USGS)* * [*http://pubs.usgs.gov/dds/dds-069/dds-069-ff/downloads/Excel tables/Province Summary.xlsx*](http://pubs.usgs.gov/dds/dds-069/dds-069-ff/downloads/Excel%20tables/Province%20Summary.xlsx) * *Accessed: 12/12/13* * *Citation:[4]* | *2000 World Petroleum Assessment - Geologic Provinces of the World*   * Type: Vector Polygons * Scale: 1: 5,000,000 * Values: Province name, province id, total mean undiscovered petroleum resources (million barrels of oil equivalent) * Reference Date: 2000   *2012 World Petroleum Assessment – Province Summary*   * Type: Excel table * Scale: NA * Value: Total BOE Mean (million barrels of oil equivalent) * Reference Date: 2013 |
| Conventional oil and gas (cont.) | *US National Oil and Gas Assessments 2013*   * US Geologic Survey (USGS) * <http://certmapper.cr.usgs.gov/data/noga00/natl/tabular/2013/Summary_13_Final.xls> * Accessed: 9/3/13 * Citation number [5]   *Petroleum Reserves by Basin as at 1 Jan 2011- Category 2*   * Geoscience Australia * <http://www.ga.gov.au/data-pubs/data-and-publications-search/publications/oil-gas-resources-australia/2010/reserves/table-1> * Accessed: 01/15/2014 * Citation: [6] | *US National Oil and Gas Assessments 2013*   * Type: Excel table * Scale: NA * Values: Conventional Oil mean (billions of barrels), Conventional Gas mean (trillions of cubic feet), Natural Gas Liquids mean (billions of barrels) * Reference Date: 2013   *Petroleum Reserves by Basin as at 1 Jan 2011- Category 2*   * Type: Excel table * Scale: NA * Values: Crude oil (millions of barrels), Sales gas (trillions of cubic feet), LPG (millions of barrels) * Reference Date: 2011 |
| Unconventional oil and gas | *World Shale Gas and Shale Oil Resources*   * US Energy Information Administration * <http://www.eia.gov/analysis/studies/worldshalegas/pdf/fullreport.pdf> * Accessed: October 15, 2013 * Citation: [7]   *US National Oil and Gas Assessments 2013*   * US Geologic Survey (USGS) * <http://certmapper.cr.usgs.gov/data/noga00/natl/tabular/2013/Summary_13_Final.xls> * Accessed: 9/3/13 * Citation: [5] | *World Shale Gas and Shale Oil Resources*   * Type: Maps and Tables in PDF * Scale: Variable * Values: Risked Technically Recoverable Resource Oil (millions of barrels) and Natural Gas (trillions of cubic feet) * Reference Date: 2013   *US National Oil and Gas Assessments 2013*   * Type: Excel table * Scale: NA * Values: Continuous Shale Gas (trillions of cubic feet) and Continuous Oil Gas mean (millions of barrels) * Reference Date: 2013 |
| Coal | *Global Coal Basins*   * (see S2 Table ) * All data accessed from 11/1/2013 to 12/20/2013   *Global Coal Reserves*   * US Energy Information Administration * <http://www.eia.gov/cfapps/ipdbproject/IEDIndex3.cfm?tid=1&pid=7&aid=6> * Accessed: 01/20/14 * Citation: [8]   *US Coal Reserves*   * US Energy Information Administration * <http://www.eia.gov/totalenergy/data/annual/showtext.cfm?t=ptb0408> * Accessed: 01/20/14 * Citation: [9]   *India Coal Reserves*   * Wuppertal Institute * <http://epub.wupperinst.org/frontdoor/index/index/docId/4582> * Accessed: 02/13/14 * Citation: [10]   *China Coal Reserves*   * Wuppertal Institute * <http://epub.wupperinst.org/frontdoor/index/index/docId/4583> * Accessed: 02/13/14 * Citation: [11]   *Australia Coal Reserves*   * Geoscience Australia * <http://epub.wupperinst.org/frontdoor/index/index/docId/4583> * Accessed: 02/20/14 * Citation: [12] | *Global Coal Basins*   * Type: Vector Polygons and digital maps * Scale: Variable * Values: basin area * Date: Varying   *Global Coal Reserves*   * Type: Excel data * Scale: na * Values: coal reserves (short tons) * Reference Date: 2008   *US Coal Reserves*   * Type: Excel table * Scale: na * Values: coal reserves (short tons) * Reference Date: 2011   *India Coal Reserves*   * Type: Table 10-6 in PDF * Scale: na * Values: coal reserves (million tons) * Reference Date: 2010   *China Coal Reserves*   * Type: Table 20-7 in PDF * Scale: na * Values: coal reserves (million tons) * Reference Date: 2006   *Australia Coal Reserves*   * Type: Table 3 in PDF * Scale: na * Values: demonstrated economic reserves (million tons) * Reference Date: 2011 |
| Wind | *Global Wind speed at 80m height*   * 3Tier * <http://maps.google.com/gallery/details?id=zJuaSgXp_WLc.kTBytKPmNODY&hl=en>; geotiff available upon request * Accessed: 03/05/14 * Citation: [13] | *Global Wind speed at 80m height*   * Type: Raster * Resolution: 5km * Values: average annual wind speed (m/s) * Reference Date: based on hourly data 2002 - 2012 |
| Solar | *Global Solar Irradiance*   * 3Tier * <http://maps.google.com/gallery/details?id=zJuaSgXp_WLc.kzhA8d4O7_mk&hl=en>; geotiff available upon request * Accessed: 03/05/14 * Citation: [14] | *Global Solar Irradiance*   * Type: Raster * Resolution: 3km * Values: average annual global horizontal irradiance (W/m2) * Reference Date: based on hourly data 2002 - 2012 |
| Biofuels | *Harvested Area and Yields of Six First-Generation Biofuel Crops*   * McGill University’s Land Use and the Global Environment Lab * <http://www.geog.mcgill.ca/landuse/pub/Data/175crops2000/> * Accessed: 04/15/2014 * Citation: [15]   *Historic Cropland 2000 -2011:*   * McGill University’s Land Use and the Global Environment Lab * Personal Contact * Accessed: 04/15/2014 * Citation: Unpublished update to [2] | *Harvested Area and Yields of Six First-Generation Biofuel Crops*   * Type: Raster * Resolution: 5 arc minute (~10km) * Value: Proportion of cell and yield (tons/ha) of specific crop * Reference Date: 2000   *Historic Cropland 2000 - 2011:*   * Type: Raster * Resolution: 5 arc minute (~10km) * Value: Proportion of cell cropland * Reference Date: 2000 -2011 |
| Mining | *Mineral Resources Data System (MRDS)*   * US Geologic Survey (USGS) * <http://mrdata.usgs.gov/mrds/> * Accessed: 06/04/2013 * Citation: [16]   *Global Minerals Deposits Update*   * US Geologic Survey (USGS) * <http://pubs.usgs.gov/of/2008/1155/data/> , <http://pubs.usgs.gov/of/2003/of03-107/data_v1.3/> ,<http://pubs.usgs.gov/of/2009/1045/GIS/> * Accessed: 06/05/2013 * Citations: [17–19]   *World Geoscience Database*   * Geologic Survey of Canada * <http://www.arcgis.com/home/item.html?id=3028f283dab14dd09a7a61b7c9ba0a87> * Accessed: 06/01/2013 * Citation: [20] | *Mineral Resources Data System (MRDS)*   * Type: Vector points * Scale: Variable * Values: Development status * Reference Date: Variable   *Global Minerals Deposits Update*   * Type: Vector points * Scale: Variable * Values: Development status * Reference Date: Variable   *World Geoscience Database*   * Type: Vector points * Scale: Variable * Values: Development status * Reference Date: Variable |

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