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Natural Hazards
and Earth System
Sciences
Discussions



Supplement of

How severe Space Weather can disrupt global supply chains

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Table 1: Economic damage per country for all 3 different storm scenarios (negative values indicate a possible increase in consumption possibilities).

Country	Scenario 1 [\$US]	Scenario 2 [\$US]	Scenario 3 [\$US]
Afghanistan	1.04E+09	1.03E+09	1.03E+09
Albania	9.25E+08	9.08E+08	9.12E+08
Algeria	-1.46E+09	5.42E+09	1.67E+09
Andorra	2.01E+08	1.96E+08	1.97E+08
Angola	-4.91E+08	3.14E+09	3.22E+09
Antigua	6.51E+07	6.23E+07	6.31E+07
Argentina	2.23E+10	1.47E+10	9.36E+09
Armenia	6.47E+08	6.27E+08	6.32E+08
Aruba	1.32E+08	1.39E+08	1.50E+08
Australia	5.64E+09	2.64E+10	3.72E+10
Austria	2.07E+10	2.00E+10	1.98E+10
Azerbaijan	-2.21E+08	2.29E+08	-5.41E+08
Bahamas	5.53E+08	5.50E+08	5.50E+08
Bahrain	7.78E+08	7.19E+08	7.17E+08
Bangladesh	7.21E+09	7.19E+09	3.87E+09
Barbados	2.77E+08	2.77E+08	2.79E+08
Belarus	1.40E+08	7.97E+06	3.20E+07
Belgium	2.77E+10	2.65E+10	2.41E+10
Belize	9.42E+07	9.32E+07	9.43E+07
Benin	4.69E+08	4.62E+08	4.64E+08
Bermuda	4.69E+08	4.67E+08	4.68E+08
Bhutan	6.00E+07	5.33E+07	5.40E+07
Bolivia	1.12E+09	9.41E+08	9.55E+08
Bosnia and Herzegovina	1.08E+09	1.06E+09	1.06E+09
Botswana	4.88E+08	4.83E+08	4.82E+08
Brazil	1.12E+11	9.16E+10	-1.20E+10
British Virgin Islands	3.80E+07	3.38E+07	3.44E+07
Brunei	2.90E+08	2.72E+08	2.46E+08
Bulgaria	2.99E+09	2.81E+09	2.84E+09
Burkina Faso	1.49E+08	1.41E+08	1.42E+08
Burundi	1.22E+08	1.20E+08	1.70E+08
Cambodia	8.70E+08	8.66E+08	8.67E+08
Cameroon	1.55E+09	1.51E+09	1.52E+09
Canada	8.69E+10	8.96E+10	9.11E+10
Cape Verde	1.03E+08	1.01E+08	1.01E+08
Cayman Islands	1.91E+08	1.87E+08	1.89E+08
Central African Republic	8.45E+07	8.24E+07	1.23E+08
Chad	1.66E+08	1.60E+08	2.37E+08
Chile	1.22E+10	8.80E+09	8.99E+09
China	2.17E+11	2.13E+11	2.21E+11
Colombia	1.53E+10	1.51E+10	1.68E+10

Congo	3.89E+08	3.90E+08	4.08E+08
Costa Rica	2.44E+09	2.47E+09	2.49E+09
Croatia	1.05E+09	3.13E+09	3.15E+09
Cuba	5.15E+08	3.37E+09	3.38E+09
Cyprus	9.04E+08	1.66E+09	1.66E+09
Czech Republic	5.31E+09	1.08E+10	1.01E+10
Cote d'Ivoire	7.39E+08	1.43E+09	1.44E+09
North Korea	1.02E+08	4.80E+08	4.91E+08
DR Congo	1.36E+09	1.49E+09	1.49E+09
Denmark	7.77E+09	1.47E+10	1.39E+10
Djibouti	7.28E+07	7.04E+07	7.06E+07
Dominican Republic	2.01E+09	4.06E+09	2.06E+09
Ecuador	3.26E+09	3.51E+09	2.46E+09
Egypt	8.64E+09	2.41E+10	1.24E+10
El Salvador	1.02E+09	1.80E+09	1.79E+09
Eritrea	8.63E+07	1.13E+08	1.12E+08
Estonia	1.08E+09	1.01E+09	1.02E+09
Ethiopia	4.33E+07	1.45E+09	1.44E+09
Fiji	2.13E+08	2.16E+08	2.16E+08
Finland	-6.26E+09	1.06E+10	1.08E+10
France	-5.14E+10	1.33E+11	1.81E+10
French Polynesia	5.23E+08	5.26E+08	5.23E+08
Gabon	-4.06E+08	6.52E+08	6.50E+08
Gambia	4.04E+07	5.20E+07	5.16E+07
Georgia	8.33E+08	9.43E+08	9.49E+08
Germany	1.03E+11	1.83E+11	1.76E+11
Ghana	8.82E+08	1.82E+09	1.82E+09
Greece	6.60E+09	1.95E+10	1.67E+10
Greenland	8.83E+07	8.42E+07	8.43E+07
Guatemala	1.90E+09	3.43E+09	3.46E+09
Guinea	1.49E+08	3.34E+08	3.35E+08
Guyana	1.77E+10	1.88E+10	1.88E+10
Haiti	5.13E+08	5.74E+08	5.74E+08
Honduras	1.15E+09	1.17E+09	1.17E+09
Hong Kong	1.49E+10	1.47E+10	1.47E+10
Hungary	7.80E+09	7.54E+09	7.39E+09
Iceland	7.21E+08	7.06E+08	7.10E+08
India	9.22E+09	7.25E+10	6.59E+10
Indonesia	-4.14E+09	3.21E+10	3.31E+10
Iran	-1.43E+10	2.73E+09	-2.26E+09
Iraq	-3.07E+08	4.50E+09	4.53E+09
Ireland	7.87E+09	1.18E+10	1.21E+10
Israel	1.65E+09	7.21E+09	6.47E+09
Italy	-1.45E+10	1.24E+11	8.48E+10
Jamaica	1.00E+09	1.01E+09	1.01E+09

Japan	-1.96E+10	9.82E+10	3.20E+11
Jordan	1.63E+09	1.77E+09	1.78E+09
Kazakhstan	-2.38E+09	2.72E+09	7.06E+08
Kenya	1.49E+09	2.16E+09	2.16E+09
Kuwait	-3.11E+09	-2.40E+09	-2.42E+09
Kyrgyzstan	3.32E+08	2.97E+08	3.01E+08
Laos	3.29E+08	3.17E+08	3.17E+08
Latvia	5.59E+08	1.32E+09	1.37E+09
Lebanon	7.96E+08	2.38E+09	2.40E+09
Lesotho	1.72E+08	1.73E+08	1.72E+08
Liberia	8.18E+07	7.43E+07	7.53E+07
Libya	-1.90E+09	2.84E+09	-1.84E+08
Liechtenstein	2.88E+08	2.86E+08	2.86E+08
Lithuania	1.71E+09	2.14E+09	2.16E+09
Luxembourg	2.16E+09	1.92E+09	1.95E+09
Macao SAR	7.84E+08	7.77E+08	7.78E+08
Madagascar	1.82E+08	7.35E+08	7.38E+08
Malawi	3.09E+08	3.53E+08	3.53E+08
Malaysia	1.07E+10	1.35E+10	1.33E+10
Maldives	7.65E+07	7.30E+07	7.35E+07
Mali	3.52E+07	5.34E+08	5.35E+08
Malta	4.48E+08	4.73E+08	4.78E+08
Mauritania	2.39E+08	2.27E+08	2.27E+08
Mauritius	6.95E+08	6.94E+08	7.00E+08
Mexico	6.21E+09	5.05E+10	1.96E+10
Monaco	1.53E+08	3.27E+08	3.27E+08
Mongolia	2.41E+08	2.30E+08	2.54E+08
Montenegro	3.15E+08	3.12E+08	3.12E+08
Morocco	1.44E+09	5.00E+09	5.04E+09
Mozambique	3.74E+08	6.54E+08	6.54E+08
Myanmar	-5.71E+08	9.65E+08	-5.90E+08
Namibia	3.01E+08	6.50E+08	6.50E+08
Nepal	3.49E+08	1.18E+09	1.17E+09
Netherlands	1.95E+08	4.35E+10	4.08E+10
Netherlands Antilles	2.10E+08	2.21E+08	2.23E+08
New Caledonia	4.62E+08	4.57E+08	4.56E+08
New Zealand	8.04E+09	8.05E+09	8.71E+09
Nicaragua	7.51E+08	7.58E+08	7.60E+08
Niger	4.90E+08	4.83E+08	4.85E+08
Nigeria	2.38E+09	8.37E+09	8.09E+09
Norway	8.06E+08	1.31E+10	1.32E+10
Gaza Strip	6.05E+08	6.04E+08	6.05E+08
Oman	-8.99E+08	1.96E+09	3.57E+08
Pakistan	7.70E+08	1.38E+10	1.38E+10
Panama	1.71E+09	1.70E+09	1.71E+09

Papua New Guinea	5.39E+08	4.77E+08	4.76E+08
Paraguay	1.58E+09	1.57E+09	1.68E+09
Peru	8.66E+09	8.60E+09	8.64E+09
Philippines	1.37E+10	1.43E+10	1.43E+10
Poland	2.44E+10	2.71E+10	2.63E+10
Portugal	1.02E+10	9.99E+09	8.70E+09
Qatar	1.52E+09	1.43E+09	-2.22E+09
South Korea	5.90E+10	5.87E+10	6.03E+10
Moldova	6.39E+05	2.60E+05	2.66E+05
Romania	9.18E+09	1.01E+10	1.00E+10
Russia	-2.29E+10	5.89E+10	2.76E+10
Rwanda	2.83E+08	2.82E+08	3.33E+08
Samoa	4.71E+07	4.78E+07	4.83E+07
San Marino	5.26E+07	5.04E+07	5.07E+07
Sao Tome and Principe	1.72E+07	1.68E+07	1.69E+07
Saudi Arabia	-6.39E+09	1.74E+10	1.74E+10
Senegal	3.71E+08	1.97E+09	1.97E+09
Serbia	2.91E+09	2.91E+09	2.91E+09
Seychelles	7.82E+07	7.66E+07	7.72E+07
Sierra Leone	7.23E+07	1.76E+08	1.76E+08
Singapore	2.53E+09	1.60E+10	1.58E+10
Slovakia	3.09E+09	5.42E+09	5.20E+09
Slovenia	7.28E+08	2.86E+09	2.85E+09
Somalia	4.95E+07	4.86E+07	7.79E+07
South Africa	-4.51E+09	1.84E+10	1.49E+10
Spain	-6.08E+09	7.33E+10	5.19E+10
Sri Lanka	-2.38E+08	3.05E+09	3.04E+09
Surinam	1.40E+08	1.59E+08	1.59E+08
Swaziland	2.80E+08	2.73E+08	2.73E+08
Sweden	-4.93E+09	2.21E+10	2.19E+10
Switzerland	2.62E+10	3.75E+10	3.73E+10
Syria	1.72E+09	3.68E+09	3.69E+09
Taiwan	7.41E+09	9.93E+09	9.85E+09
Tajikistan	2.37E+08	2.00E+08	2.04E+08
Thailand	3.34E+09	1.88E+10	1.87E+10
TFYR Macedonia	8.60E+08	8.58E+08	8.59E+08
Togo	2.13E+08	2.63E+08	2.63E+08
Trinidad and Tobago	9.79E+08	1.02E+09	1.10E+09
Tunisia	1.53E+09	2.96E+09	2.98E+09
Turkey	1.06E+09	4.43E+10	2.93E+10
Turkmenistan	6.24E+08	1.17E+09	1.18E+09
Uganda	4.99E+08	1.42E+09	1.41E+09
Ukraine	4.51E+09	4.70E+09	4.80E+09
UAE	1.49E+09	1.72E+10	1.69E+10
UK	2.34E+10	1.46E+11	1.34E+11

Tanzania	1.29E+08	7.53E+08	7.49E+08
USA	6.83E+11	-1.93E+11	-1.58E+11
Uruguay	2.55E+09	1.67E+09	1.41E+09
Uzbekistan	4.96E+08	1.85E+09	1.88E+09
Vanuatu	4.92E+07	4.53E+07	4.53E+07
Venezuela	5.93E+09	7.36E+09	1.23E+09
Viet Nam	3.21E+09	3.46E+09	3.38E+09
Yemen	1.94E+09	1.94E+09	1.93E+09
Zambia	3.23E+08	8.62E+08	8.61E+08
Zimbabwe	5.44E+08	1.44E+09	1.44E+09