FOI Release

Information released under the Freedom of Information Act

Title: Habitable Planet

FOI.114.15-16

Date of release: 26 January 2016

Information request

1. If we do find a habitable planet, how would the United Kingdom decide who gets to go to the new planet?
2. What makes a planet survivable?
3. What would make it necessary to find a new planet?
4. If we find a habitable planet and it has an intelligent terrestrial life there, how would the United Kingdom space agency handle this event? (The ethics behind it)

Information released

We have now completed a search of our paper and electronic records and although we do not hold this information, we have provided some answers to your questions below:

1) Travel to a habitable planet would be expensive and could only be achieved through a multi-national partnership. The selection process for astronauts would be agreed in the initial partnership agreement.

2) Survivability depends on the specific life form for example, for humans, conditions similar to Earth. However life forms that are extremophiles as the name suggest can survive extreme pressures, temperatures, alkalinity, acidity etc. A web search will provide information on the wide range of extremophiles that we know about. There have been some experiments that have exposed different microbes to space and survived. Have a look at the Wikipedia article on EXPOSE

3) There is no necessity to find a new planet, it is curiosity and humans desire to understand the universe. We need to look after our own planet as mass relocation is not possible.

4) The United Nations have set out rules concerning visiting other bodies that may sustain life. These are set out in the outer space treaty (Wikipedia – article on Planetary Protection). Basically if there is a possibility of finding life then the spacecraft/probe has to be extremely clean so that there is no chance of contaminating the life on a planet. The level of cleanliness set depends on the likelihood of life. Missions to Mars have very strict procedures and landers have to be sterilised by baking them at 100C for an extended period. If life was found, the

United Nations would have to decide whether there should be contact because of the danger of harming that eco system. Similarly they would govern the procedures for any return mission. As a minimum any spacecraft returning from a body that harbours living organism would have to treated like the most hazardous biological material just in-case. The UK would abide by the UN ruling.

You may also wish to contact the Royal Astronomical Society as they may hold the information you are looking for http://www.ras.org.uk/
