

## Re: Earth's Carrying Capacity

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**From:** Thomas Palm (*Thomas.Palm\_at\_chello.removethis.se*)

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Date: Mon, 16 Aug 2004 16:49:40 GMT

"Ian St. John" <istjohn@noemail.ca> wrote in  
news:714Uc.5659\$ZI1.251946@news20.bellglobal.com:

> *Thomas Palm wrote:*

>> *Ian Stirling <root@mauve.demon.co.uk> wrote in*

>> *news:4120b3ed\$0\$519\$ed2619ec@ptn-nntp-reader02.plus.net:*

>>

>>> *In sci.space.policy Gactimus <gactimus@xrs.net> wrote:*

>>>> *How many people can the earth support?*

>>>>

>>> *Multiply the population density of Biosphere II, which could*

>>> *probably work at that population density, with the area of the*

>>> *earth, and you get 200 billion.*

>>

>> *Biosphere II was never self-sufficient but relied heavily on energy*

>> *import,*

>

> *So does the world. But the energy 'imported' from the sun is much much*

> *greater than all of our use put together, so it is not a limiting*

> *factor.*

I wasn't talking about the diluted solar energy, but concentrated energy from powerplants to drive air conditioning etc. Had this energy been collected from solar cells the area needed for Biosphere II would have been a lot larger than the buildings themselves. That Biosphere II was transparent and used photosynthesis for its plants was quite acceptable.

>> *and against the rules had to replace the atmosphere when CO2*

>> *levels got too high.*

>

> *Yes, due to changes in soil balance. This was unexpected but not a*

> *factor in the food balance. The real point was that Biospherians found*

> *it hard to produce enough to eat and exited quite a bit thinner than*

> *they went in.*

Food balance is only one factor in staying alive. The Earth provide so many other services that we too often take for granted. Personally I'll be

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really interested in seeing how long it will take to create a self-supporting space colony. Then we'll know how hard it really is to live when we have to live in a closed system we have to regulate ourselves.