

WASHINGTON (AFP) — Humanity would need five Earths to produce the resources needed if everyone lived as profligately as Americans, according to a report issued Tuesday.

As it is, humanity each year uses resources equivalent to nearly one-and-a-half Earths to meet its needs, said the report by Global Footprint Network, an international think tank.

"We are demanding nature's services — using resources and creating CO2 emissions — at a rate 44 percent faster than what nature can regenerate and reabsorb," the document said.

"That means it takes the Earth just under 18 months to produce the ecological services humanity needs in one year," it said.

And if humankind continues to use natural resources and produce waste at the current rate, "we will require the resources of two planets to meet our demands by the early 2030s," a glutinous level of ecological spending that may cause major ecosystem collapse, the report said.

Global Footprint Network calculated the ecological footprint — the amount of land and sea needed to produce the resources a population consumes and absorb its carbon dioxide emissions — of more than 100 countries and of the entire globe.

The think tank worked out how many resources the planet has, how much humans use, and who is using what.

Back in 1961, the entire planet used just over slightly more than half

Mankind using Earth's resources at alarming rate



of Earth's biocapacity.

Today, 80 percent of countries use more biocapacity than is available within their borders. They import resources from abroad, deplete their own stocks and fill "waste sinks," such as the at-

mosphere and ocean, with carbon dioxide. The average American has an ecological footprint of nine global hectares (23 acres), or the equivalent of 17 U.S. football fields.

The average European's footprint

is half that size, but still too big to be sustainable in the long term.

At the other end of the scale are impoverished countries like Malawi, Haiti, Nepal or Bangladesh, where the footprints are around half a glo-

bal hectare, or 1.25 acres — often not even enough to provide for basic food, shelter and sanitation, the report said.

But there are relatively easy measures that can be taken to slow the rot. "In most high-income, industrialized countries like the U.S. and European countries, the biggest part of the ecological footprint is the carbon footprint," Nicole Freeling, a spokeswoman for the Global Footprint Network, told AFP.

"One of the biggest things such a country can do to reduce its ecological footprint is to manage energy more efficiently and effectively — for example, by investing in renewable energy and clean tech on the one hand, and resource-efficient infrastructure and compact urban development on the other," she said. Changing consumption habits can also reduce the global footprint.

"While people living at or below subsistence levels may need to increase their consumption to move out of poverty, more affluent people can reduce consumption and still improve their quality of life," Freeling said.

Thousands of strange creatures found deep in ocean

NEW ORLEANS (AP) — The creatures living in the depths of the ocean are as weird and outlandish as the creations in a Dr. Seuss book: tentacled transparent sea cucumbers, primitive "dumbos" that flap ear-like fins, and tubeworms that feed on oil deposits.

A report released Sunday recorded 17,650 species living below 656 feet, the point where sunlight ceases. The findings were the latest update on a 10-year census of marine life.

"Parts of the deep sea that we assumed were homogenous are actually quite complex," said Robert S. Carney, an oceanographer at Louisiana State University and a lead researcher on the deep seas.

Thousands of marine species eke out an existence in the ocean's pitch-black depths by feeding on the snowlike decaying matter that cascades down — even sunken whale bones. Oil and methane also are an energy source for the bottom-dwellers, the report said.

The researchers have found about 5,600 new species on top of the 230,000 known. They hope to add several thousand more by October 2010, when the census will be done.

The scientists say they could announce that a million or more species remain unknown. On land, biologists have catalogued about 1.5 million plants and animals.

They say they've found 5,722 species living in the extreme ocean depths, waters deeper than 3,280 feet.

"The deep sea was considered a desert until not so long ago; it's



quite amazing to have documented close to 20,000 forms of life in a zone that was thought to be barren," said Jesse Ausubel with the Alfred P. Sloan Foundation, a sponsor of the census. "The deep sea is the least explored environment on earth."

More than 40 new species of coral were documented on deep-sea mountains, along with cities of brittlestars and anemone gardens. Nearly 500 new species ranging from single-celled creatures to large squid were charted in the abyssal plains and basins.

Also of importance were the 170 new species that get their energy from chemicals spewing from ocean-bottom vents and seeps. Among them was a family of "yeti crabs," which have silky, hairlike filaments on the legs.

In the mid-Atlantic, researchers found 40 new species and 1,000 in all, said Odd Aksel Bergstad, an oceanographer with the University of Bergen in Norway who was reached by telephone in the Azores islands.

"It was a surprise to me to find such rich communities in the middle of the ocean," he said. "There were not even good maps for the area. Our understanding of the biodiversity there was very weak."

More than 2,000 scientists from 80 countries are working to catalog the oceans' species.

Researching the abyss has been costly and difficult because it involved deep-towed cameras, sonar and remotely operated vehicles that cost \$50,000 a day to operate, Carney said.

Sony Ericsson's infinite hope for a turnaround

Bored with the buttons on your current phone and their limited functions? Sony Ericsson says its new cellphones will feature an Infinite Button that can connect you to your friends, photos, music, videos and more. Well, it will do this if it can actually deliver the phones with the buttons next year.

The joint venture between two venerable electronics giants is one of the many cellphone companies to entirely miss the rapid transition of the market to smartphones. It did well for a while selling CyberShot camera phones and Walkman music phones in Europe and Asia, but it never got much of a foothold in the United States. And sales have fallen sharply, with worldwide market share falling to 4.7 percent in the second quarter, down from 7.5 percent a year earlier, according to Gartner.

Times are tough for the company. It announced Wednesday that it would eliminate 1,600 jobs worldwide and move its United States headquarters from Raleigh, N.C., to Atlanta. That's after losing 402 million euros (\$602 million) in the first nine months of year.

The road back to profit and success, the company argues, now will come from new software for smartphones it calls Nexus, featuring the Infinite Button. When it started designing the software a year ago, Sony Ericsson decided the key feature it wanted to build was a way for people to integrate all their communication by e-mail, text, and through various social networking sites.

It turns out that is the same idea that lots of other smartphone companies had, including Palm, HTC, and Motorola.

Steve Walker, the vice president for planning the company's portfolio of phones, argued that Nexus was distinctive because it linked areas that Sony was strong in — photos, music and video — with social networking.

"What social networking does is force the merger of entertainment and communication," Mr. Walker said. "You listen to music, then you post your playlist to Twitter. The next minute, your friend downloads a song from a music store. Everything is mashed up into one."

The Infinite Button is actually a small infinity sign that appears on a lot of the screens on the phone. When it's next to a person, tap it and you'll see a lot of the other information about that person — e-mail, text, social network updates and photos both on the phone and on

linked photo-sharing Web sites.

If you push the same button when you are listening to a song, you will see other music by the artist you own, tracks for sale on Sony's online store, YouTube videos of the artist, future concert dates, and so on.

Whatever context you are in at the time, the Infinite Button will provide infinite opportunities that relate to that thing, Mr. Walker said.

While much of this may be more sizzle than steak, Sony Ericsson promises one trick that could well impress your friends: photo recognition. Once you associate one snapshot with a name, the phone will find all the other pictures on the phone with a face that matches. And then the Infinite Button will appear on photos, allowing you to tap a face and see everything else you know about that person.

Interestingly, Sony's Nexus software lives entirely on the cellphone itself. Some handset makers, like HTC, have taken that approach. But others including Palm and Motorola have added Web-based services that handle some of the work of integrating various messages.

The only handset Sony has announced that will use this new software is the Xperia X10, which will be introduced early next year. That is a high-end model with an 8.1 megapixel camera and a 4.0 inch screen that uses Google's Android operating system. In Sweden, the phone will cost 6,000 Swedish kronor or about \$860. The price hasn't been set yet in other markets.

Mr. Walker said that the company hoped to introduce other less expensive smartphones that use the Nexus software as well. Like Samsung and HTC, Sony Ericsson sees Nexus as an interface that it will put on its phones regardless of the operating system. The company also makes phones using Microsoft's Windows Mobile and Nokia's Symbian operating systems.

Mr. Walker declined to say if the X10 or any of the other phones would be supported by carriers in the United States. Sony Ericsson has had trouble getting distribution in this country and has sold a number of phones through Sony stores to people willing to forgo a subsidy from a carrier. Since the company makes phones that only use the GSM standard, that leaves AT&T and T-Mobile as the only possible carriers.

(Source: The NYT)



Big Bang atom smasher records first proton hits

GENEVA (AP) — The world's largest atom smasher made another leap forward Monday by circulating beams of protons in opposite directions at the same time and causing the first particle collisions in the \$10 billion machine after more than a year of repairs, organizers said.

The true test of the Large Hadron Collider will come in the first two months of 2010, when scientists plan to start deliberately crashing protons into each other to see what they can discover about the makeup of the universe and its tiniest particles.

The collisions — seen by massive detectors — were a side effect of the quick advances being made by the LHC during its startup phase, which began Friday night, said Rolf Heuer, director-general of the European Organization for Nuclear Research, known as CERN.

"It's a great achievement to have come this far in so short a time," said Heuer.

"But we need to keep a sense of perspective — there's still much to do before we can start the LHC physics program."

Collisions were recorded in all four of the main detectors at "experiments" in rooms the size of cathedrals about 100 meters (300 feet) underground around the collider.

"This is great news, the start of a fantastic era of physics and hopefully discoveries after 20 years' work by the international community to build a machine and detectors of unprecedented complexity and performance," said Fabiola Gianotti, who represents the Atlas partial physics experiment for about 2,000 other scientists.

"It was standing room only in the ALICE control room and cheers erupted with the first collisions," said Juergen Schukraft, spokesman for that experiment, which involves heavy ion physics. "This is simply tremendous."

A CERN statement said the simultaneous beams and collisions demonstrate the excellent performance of the control system.

While the initial collisions were a side effect, intentional hits could begin within the next 10 days, mainly to check how the machine is working, said CERN spokesman James Gillies. Ultimately, the collider aims to create conditions like they were 1 trillionth to 2 trillionths of a second after the Big Bang — which scientists think marked the creation of the universe billions of years ago. Physicists also hope the collider will help them see and understand other suspected phenomena, such as dark matter, antimatter and supersymmetry.

The collider was started with great fanfare Sept. 10, 2008, only to be heavily damaged by an electrical fault nine days later. It took 14 months to repair and add protection systems to the machine before it was restarted.

The protons were traveling Monday at almost the speed of light — 11,000 times a second in each direction around the 27-kilometer (17-mile) tunnel under the Swiss-French border at Geneva.

Initial signs are very good, physicists told a news conference. The beam is of superb quality, with the protons tightly packed into hairlike lines and guided by some 1,600 superconducting magnets — 15 meters (50 feet) long — operating at temperatures colder than outer space for maximum electrical efficiency.

So far the machine is operating at 450 billion electron volts of energy, which is relatively low compared with its design capability of more than 14 times that.

Google Chrome OS: Are clouds the future of computing?

This time next year, disk drives will be a thing of the past; instead, computer users will be pulling in emails, documents, music and photos from the web, and computers will need just a few gigabytes of storage.

Google says the first Google Chrome OS powered netbooks will be ready by the second half of 2010.

At least, that's Google's vision. This week the search giant gave the world a first look at its new computer operating system, Chrome OS, which it believes could revolutionize computing.

Based on Google's web browser, also named Chrome, the operating system effectively acts as a gateway to the web. Rather than storing files and documents on the computer's hard drive, Chrome OS instead relies on data stored on remote servers, pulling these files, on demand, to any internet-connected computer. Users access their emails, documents or social networking sites by clicking on application tabs in the browser-like interface and use panels at the bottom of the desktop to send an instant message or view a video.

Google says the benefit of this "cloud computing" approach is that computers can boot up faster — indeed, in the demonstration this week, Chrome OS was up and running and connecting to the web in just seven seconds, substantially faster than most other computers lumber into life. By the time the first Chrome computers hit shops, Google wants that time to be reduced to around two seconds.

"We want Chrome to be blazingly fast," said Sundar Pichai, Google's vice president of product management. "We want it to be like a TV — turn it on and it's booted up."

In a world where 90pc of computers run Microsoft's Windows operating system, Chrome represents a step-change. Chrome will run only on computers that use flash memory solid state drives instead of conventional hard drives. It's a bold approach. Google is taking a leaf out of Apple's book to design an end-to-end user experience where the hardware is built specifically to support the software.

Google says that the time is right to move away from traditional desktop computing. With more and more services now in "the cloud" — such as Flickr, the photo-sharing website, and many music-streaming and video services — and consumers snapping up cheap, ultra-portable "netbook" computers, the conditions are in place to launch a new platform that exploits these advances to provide a completely new way of using a computer. "Over the past few years, people have been spending more and more of their time online doing more and more powerful things, and we wanted to build a fundamentally different computing experience built for the way we use the web today," says Pichai. "With Google Chrome OS, we've made computing faster, easier and safer than ever before."

But some experts say Google could find it difficult to persuade consumers. Users will not be able to install their own software or applications on Chrome OS devices — so that means no iTunes, no Skype and no Tweetdeck.

"There's no doubt that Chrome OS looks fast, but it's fairly limited in terms of its functionality," says Annette Jump, an analyst with Gartner. "A lot of work needs to be done to convince consumers that this operating system will be useful to them." And that's not the only stumbling block Chrome OS faces — its reliance on always-on web connectivity might be possible in large cities, with good mobile phone network coverage and plenty of Wi-Fi hotspots, but in rural areas, or on a flight, Chrome will be hobbled.

(Source: Telegraph)