

WHAT DO the Russians and land speculators have in common? They both have long time horizons. That is because the bosses of the Communist Party have got nothing to lose, and the speculators have got everything to gain, by playing the waiting game.

The secret is in judging where the biggest profits are to be made in a generation's time, rather than worrying about a fast buck today. Changing patterns of land use and resource exploitation are the best money-spinners.

They have one other characteristic in common: neither likes to take risks. Nor do they: control over natural resources provides a risk-free means of making money!

Take, for example, the decision to build the Channel Tunnel. Britain and France are spending billions of pounds on a fast train route under the water between Dover and Calais. The big capital gains will be made by the people who already own land near the railway terminals, such as Ashford, Kent.

Other shrewd operators will already have bought land in the French countryside, which will be within a three-hour train journey of London. Today's prices are around £25,000 for handsome houses in secluded parts of Normandy and Brittany. When the trains start running through the twin-track tunnel in 1993, Londoners will decide that their country retreats might just as well be in France as the West Country.

House prices will boom: so those who are buying up the peasant cottages now will reap the rewards. Dorset estate agent Jeremy Gunn says that even now he is finalising 28 deals, including the sale of seven properties to one man.

AND so to the Russians. They are about to perform tricks with mirrors, which will have a dramatic impact on land use. Not tricks of the circus magician sort, for there is nothing illusory about what the Soviet Union is doing in outer space.

They plan to transform the power of the sun into infra-red laser beams, for transmission back to earth. Then, they will

- Increase the productivity of the soil, extending the photosynthesis process during the

growing season;

- Change urban work routines, by lighting up cities with solar power; and

- Tap into an infinite power resource to ensure that, when their oil runs out, they will control a new source of energy that is "clean" and infinite in supply.

This programme has crucial consequences for countries in the cold regions of the northern hemisphere, like Norway and Canada.

North Sea Oil will start to run out before the end of the century. What happens then to the price-competitiveness of industry, compared with the newly industrialised countries with their relatively cheaper labour forces?

The burden on taxpayers of subsidising the agricultural sector – justified by governments on the grounds of severe climate – is very heavy. Even if that burden could continue to be financed by people working in industry and commerce, a new means of aiding farmers would make sense.

The USA is now a long way behind in this area of research. Ronald Reagan's infatuation with the military use of outer space has crippled U.S. policy, whereas – from the outset – the Russians have been exploring the industrial uses to which they can put natural resources of other planets like Phobos.

Until recently, under the compulsion of short-term democratic politics, the Reagan Administration had us believe that changing the growing seasons,

Far, far horizons

and increasing the number of hours of sunlight, was a fantasy for science fiction writers. The evidence suggests that Moscow is treating the prospect with deadly seriousness.

By failing to monitor the direction of scientific exploration now in progress in the Soviet Union, the West could suffer a severe economic blow. Some observers are seriously canvassing the possibility of the rich industrialised economies slumping back into peasant-based agricultural systems while the wealth-generating axis shifts towards eastern Europe.

Moscow's time-scale – 20 years – is not more than one generation, but it is longer than the period which Western governments are willing to countenance: their budgetary commitments are heavily biased in favour of taking into account the need to win election votes.

Land speculators, on the other hand, are willing to tie up their money for up to 15 years in the expectation of a gain: they usually make a fortune.

WHAT ARE the economic lessons of this story?

Solar power would enable farmers in the hostile parts of the northern hemisphere to generate higher incomes, which in turn would enable their governments to reduce their cash subsidies to this sector. Canada and the Scandinavian countries would be in a better position to restructure their economies. Lower cash subsidies to farmers means lower tax rates – which ought to encourage higher investment in wealth-generating enterprises.

The 21st century will present

By Fred Harrison

major challenges to the West, both from the economic dynamism threatened by Mikhail Gorbachev's reforms as well as the continued industrialisation of today's under-developed countries. It would be a serious mistake not to compete – better still, collaborate – with the Russians on the opportunities offered by outer space.

But why should we suspect that the Soviet Union intends to exploit space for industrial rather than (or just for) military purposes?

(1) Their scientist have been astonishingly frank about it. The frankest revelation was from a team of academicians led by Sergei Sarkisjan from the Inter-cosmos Council, the Russian international space office. Their paper titled "Socio-economic benefits connected with the use of space power and energy systems" (1985) contains an outline of practical exploration and invention.

Soviet research indicates that space mirrors could provide the power to light up a city right down to the level of street illuminations. And they could boost Russia's ailing agricultural sector by beaming down additional hours of sunlight on to northern farmlands at harvest time. The beams would penetrate all but the densest clouds.

This would reduce Russia's dependence on American grain, and transform the global distribution of economic, as well as political, power.

(2) The successful testing of the Energia rocket. This is designed to lift into orbit payloads nine times as large as those that the US space shuttle can carry. Energia cuts launch costs by a factor of 10. So industrial work stations in space can be established at a tolerable cost.

Academician Vladimir Kotelnikov, the chairman of Inter-cosmos, admits: "The USSR plans to orbit large-scale structures,



• Channel Tunnel workings on the Kent coast

including reflectors one kilometer across, to feed solar panels for use as power stations."

Alan Bond, the British scientist who invented HOTOL, the Horizontal take off and Landing vehicle which experts admit is superior to anything invented by US scientists, warns: "At the moment the Soviets have planned for nothing less than economic domination of the world."

(3) The continuous presence in space of one or more Russian cosmonauts. This is more than of symbolic significance. It is vital to learn about the biomedical aspects of space exploration, because it would take 450 days to get to Mars.

A Russian cosmonaut, Yuri Romanenko, spent 326 days in space – compared with America's longest trip of 83 days. With 60 cosmonauts, the Russians have clocked up 12 man-years of experience in space, more than twice as much as the West.

MOSCOW believes that nothing less than the salvation of Earth is at stake. Their studies show that, during the early part of the next century, pollution levels will become intolerable, population growth rates will cripple man's ability to feed himself, and energy sources will be exhausted.

By industrialising space, they say, these problems can be solved – permanently. The sun provides an inexhaustible source of power. Space provides a

"pollution sink" into which we can get rid of destructive by-products. And we can continue to grow more food in the temperate climates of the northern hemisphere.

How can we be sure that the Russians would want to share the benefits of their exploration? Alan Bond asked Academician Sarkisyan: "Is your study just an academic exercise, or do you really have a space power programme?"

The reply: "We have been watching your studies in the West and we agree with your main conclusions. We do have a programme, and the first elements are in the current five-year plan. In due course, we will be offering collaboration to the West."

That collaboration will probably only be forthcoming if the West has something to offer; and that means channelling new research in a similar direction to the Soviet Union's.

The threat doesn't come from laser-based weapons which could shatter buildings from outer space (Reagan's SDI programme), but from Russian research which will one day force a change in the patterns of use – and value – of land.

We can fairly assume that the land speculators are even now laying their plans for buying properties in the areas that will most benefit from the links between Earth and the planets in space. After all, we are only talking about changes in the course of another 20 years!