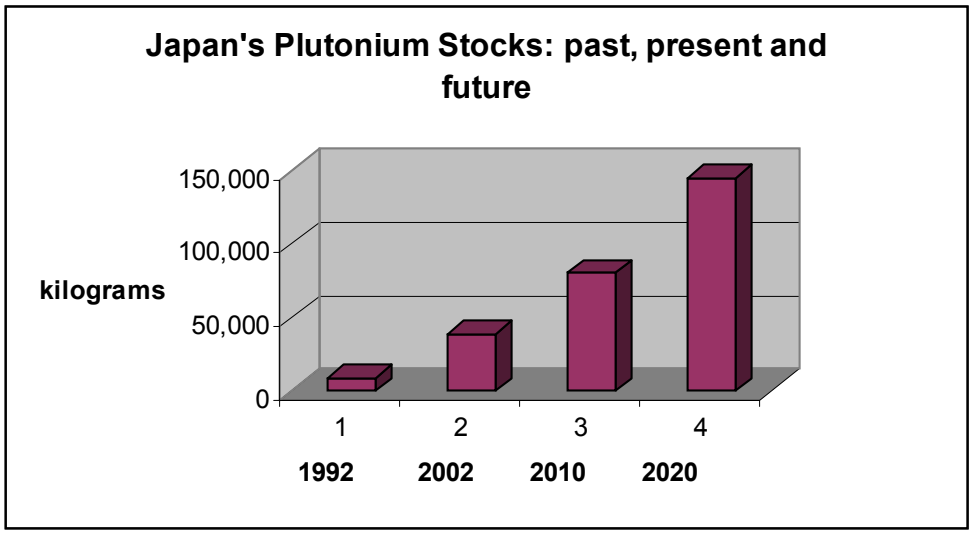

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* *Japan is currently seeking to proceed with its mixed plutonium-uranium oxide (MOX) in its nuclear reactors, though the program has been plagued with problems and delays. To date, Japan has accumulated 34 metric tonnes of plutonium at spent fuel reprocessing factories in Britain and France, which is set to increase to 45 tons within the next five years. Its national domestic stockpile stands currently at just over 5 tons. Government and utility plans are proceeding for a start up of Japan's first large reprocessing plant in 2005, at Rokkasho-mura. This facility is scheduled to reprocess 10,000 tons of nuclear reactor spent fuel by 2020, yielding 100 tons of plutonium.*

Japanese Government policy is to have 16-18 reactors loaded with MOX by 2010. Given the increasing problems for this plan, this almost impossible to foresee. Even MOX loading in 10 reactors by this date is stretching credibility; however for the purpose of projecting future plutonium stocks Greenpeace has worked on this scenario, but with no additional reactor loaded beyond this.

With total available stocks of plutonium exceeding 80 tons by 2010, on a ten MOX reactor schedule around 9,000kg of this could be used, leaving Japan a surplus stockpile of over 70 tons. By 2020, total supply of plutonium will have risen to 145 tons. With total plutonium MOX loading by this date potentially amounting to 34,000kg, surplus stocks of plutonium will be as much as 110 tons. More than contained in the entire United States nuclear weapons arsenal.

These figures are based upon a loading percentage of 30% core fuel being MOX, and an average of 5% enrichment of plutonium. The current French MOX loading loads around 5 tons of plutonium each year, in a total of 20 PWR's. It is worth noting that Japan's PWR's, which would make up half of the reactors loaded with MOX are licensed to burn MOX at a higher GWt/HM which would mean longer use of the loaded plutonium, thus reducing annual loading. On the other hand Japan will seek to increase the actual plutonium enrichment - the percentage of plutonium in each fuel assembly.