

## A brief history of the Ramu nickel mine and the Submarine Tailings Disposal issue

1. Around January 1999 Ramu Nickel Ltd (a subsidiary of Highlands Pacific Ltd) lodged an application for a Special Mining lease for the Ramu Nickel project and lodged the Ramu Nickel Environmental Plan 1999 for the project with the Department of Environment and Conservation.
2. On 21 March 2000 the Department of Environment and Conservation approved the Ramu Nickel Environmental Plan 1999 under the repealed legislation the *Environmental Planning Act (repealed)*.
3. On 26 July 2000 the Special Mining Lease (“SML”) was granted to Ramu Nickel Ltd.
4. The SML and Environmental Plan Approval was subject to numerous conditions including that the lessee shall comply with all the relevant legislation applicable to the lease including that administered by the department of Mining, Office of Environment and Conservation and the Bureau of Water Resources.
5. On 1 January 2004, the *Environment Act 2000* came into force and amongst other things repealed the *Environmental Planning Act*, the *Water resources Act* and the *Environmental Contaminants Act*.
6. The Ramu Nickel Environmental Plan 1999 Approval itself was technically saved however pursuant to section 136 of the *Environment Act 2000*.
7. In 2004 however the China Metallurgical Construction Company (“MCC”), a Chinese State-owned steel company started negotiations to fully finance the operations, including rights to construct, operate and secure off take arrangements for the proposed Ramu Nickel mine.
8. On 9 February 2004 a framework agreement was signed in Beijing by MCC, Ramu Nickel Limited, Mineral Resources Development Company Limited and the Independent State of Papua New Guinea. No any landowners were consulted or involved. The framework agreement states that those parties agree in good faith to form a Joint Venture to develop the project and that the “landowners” would be a party to the Joint Venture. The agreement records that that Ramu Nickel Limited and the State shall give **the mine and all exploitation rights to MCC** in exchange for **a 15% interest(to be divided 8.7% to Highlands Pacific and 6.3% to the State)** and that MCC would be responsible for the 100% funding of the project.
9. A Joint Venture Agreement and also a Mining Development Contract was signed between MCC, Ramu Nickel Limited and the Independent State of Papua New Guinea in 2005 and the SML was transferred from Ramu Nickel Limited to MCC in or around October 2005.
10. A company was registered by its 100% owner MCC to manage and operate the Ramu Nickel mine project.
11. The construction of the mine commenced in 2008.
12. When operational, the Ramu Nickel mine will be a series of open cut mine pits and a beneficiation plant to produce ore slurry at Kurumbrukari in Madang Province. A slurry pipeline approximately 134km long will transport the ore slurry from the Kurubrukari mine site eastwards to the refinery plant at Basamuk Bay on the Rai Coast. The refinery plant will produce nickel metal and a cobalt salt product using acid pressure leaching technology.

### **The Ramu Nickel Environmental Plan 1999 and Environmental Approval**

13. The Ramu Nickel Environmental Plan 1999 was prepared by NSR Environmental Consultants Pty Ltd, an Australian company that has advised companies on 25 ocean disposal projects clustered in 9 countries being Indonesia, Papua New Guinea, New Caledonia, the Philippines, Chile, Fiji, the Solomon Islands, Cuba and Canada.
14. According to the Ramu Nickel Environmental Plan 1999, the mine will dump 5 million tones of hot tailings into Astrolabe Bay each year for the life of the mine which is estimated at 20 years, totaling 100 million tones of tailings. The tailings will consist of mainly sediment and fines which will contain among other substances high levels of heavy metals including but not limited to manganese, chromium, nickel and mercury. It will also contain high levels of ammonia and sulphuric acid. The mine will additionally dump waste rock and soil directly into the sea at Basamuk Bay during the construction and life of the mine as well as raw sewerage from 2500 people for 30 months.

### **Lutheran church investigation**

15. Because of concerns as to the environmental effects of these tailings and waste disposal, in late 2000 the Evangelical Lutheran Church of Papua New Guinea commissioned the Mineral Policy Institute to undertake an independent review of aspects of the Ramu Nickel Environmental Plan 1999 as compiled by Natural Research Systems ("NSR"). This was motivated by concerns for the well being of the Madang Community and an underlying desire for both development and environmental protection in Madang province
16. The selection of the team for this review was based on two criteria; independence and expertise. Consultants were required that had a track record of excellence in research in the region, who had experience in environmental impact assessments and who could talk authoritatively on complementary aspects of the Ramu Environmental Plan that involved deep Sea Tailings Disposal. Independence was crucial, individuals were needed who had not worked for the mining industry in Papua New Guinea and who were not aligned with "green" groups in other parts of the world.
17. After a search for suitable candidates , three eminent scientists from Australian institutions were employed being
  - a) Dr John Luick, an oceanographer and Lecturer in Ocean wave Theory and Scientific Consultant to the National Tidal facility at The Flinders University of South Australia.
  - b) Dr Gregg Brunskill, a marine geochemist and research fellow at the Australian Institute of Marine Science in Townsville Australia
  - c) Dr Marcus Sheaves, a marine ecologist and Lecturer at James Cook University in Townsville Australia.
26. Dr Phil Shearman, an Ecologist and the Director of the Remote Sensing Centre in the Biology Department at the School of Natural and Physical Sciences at the University of Papua New Guinea was chosen to author the final report and analyse the three separate findings and reports of the scientists.
27. The fundamental findings of the reports were that NSR had compiled a well presented but fatally flawed case for the discharge of mine tailings via a submarine pipe into Astrolabe Bay and that further that there can be no doubt that disturbance on the scale of a Submarine Tailings Disposal operation will have significant biological impact.
28. The report found If the dumping is to proceed, then the potential consequences should be weighed against the environmental degradation which could result from both Submarine

Tailings Disposal and other tailings disposal methods. The Government of Papua New Guinea did not have this option in regard to the Ramu Nickel Project as the Environmental Plan prepared by NSR gave no indication of the likely impacts or risks associated with the proposal and did not thoroughly examine alternatives to marine discharge.

- 29 Essentially the review found that the behavior of tailings discharged into Astrolabe Bay was not adequately explained in the NSR Environmental Plan. While NSR claim that tailings will be deposited safely on the deep floor of the Vitiaz Basin, on the basis of their own data, this is extremely improbable. The review found overall sheds significant doubt on NSR's predictions about the biological impacts of Submarine Tailings Disposal in Astrolabe Bay.

#### **Events after the Lutheran Report**

- 30 The project was essentially put on hold from 2001 to 2006 after the SML had been transferred to MCC. Given the announcement that the Ramu Nickel project was to start, people in Madang started expressing concerns about it. An update forum was held at Divine Word on Monday 14 August 2006 and there, the Lutheran Church presented to Sir Peter Barter (the then Member for Madang, Minister and member of NEC) a copy of their report commissioned in 2000/2001. Sir Peter Barter described the report as credible and assured the church representatives that the issue would be looked at seriously. The people waited.
- 31 On 9 February 2007, a report was published in the Post Courier newspaper by a Clement Kunandi Victo, which highlighted the dangerous effects of the proposed dumping of the tailings on the fisheries resources in Madang. There was no response from Government.
- 32 On 14 January 2008, it was reported that 1.2 million Lutherans (the Plaintiffs and people at Basamuk are Lutherans) had petitioned the Somare Government to seriously look at the environmental impact of the Ramu Nickel mine, and that that action had been taken after Prime Minister Michael Somare rejected three attempts in 2007 by the ELCPNG head the late Bishop Dr Wesley Kigasung to receive the environmental study commissioned by the Church. It reported that Dr Kigasung had wrote to Sir Michael, his deputy and Mining Minister Dr Puka Temu and Environment and Conservation Minister Benny Allen to accept the report and seriously consider the mine's pollution impact to the sea. Former Member of Parliament Sir Peter Barter joined with Dr Kigasung and requested that these politicians meet personally with Dr Kigasung. There was no response from the Ministers.
- 33 On 7 April 2008, a Newspaper report in the Post Courier stated that the Fisheries Minister Ben Semri had said that he would not allow mine tailings from the Ramu Nickel project to enter PNG waters and said that he totally opposed the submarine tailings disposal and it would be a major environmental disaster if true. He was reported as stating in parliament that the NFA documented and strongly opposed the idea and stated that *"NFA will not be irresponsible to let destruction or pollution enter PNG seas."*
- 34 On the 10<sup>th</sup> of April 2008, a Post Courier newspaper report recorded Minister Semri as stating that 30,000 people in the country would lose their jobs and fish exports could be rejected if the waters of PNG were polluted with mining waste and that the NFA opposed any toxic form of tailings.
- 35 On 11 April 2008, the Post Courier reported that the opposition asked the government a series of questions during a press conference relating to environmental damage and asked and asked the Ministers of Mining, Environment and Fisheries to state what their positions were with regard to the much debated Basamuk Tailings.
- 36 On 18 April 2008, the Post Courier reported that the catholic Bishops Conference issued a statement saying they joined the increasing number of groups and individuals calling for a

review of the environmental issues involving the Ramu Nickel project and stated that the submarine tailings disposal plan must not be allowed to go ahead.

- 37 On 13 May 2008, the Post Courier reported that the Head of the Lutheran Church of PNG, Dr Kisagung described the prolonged silence of Sir Michael Somare on their report into the effects of the Ramu Nickel mine waste on marine life in Madang Province as a matter of great concern not only for the church but also for the country as a whole.

#### **Scottish Association of Marine Science investigation**

- 38 Eventually Dr Puka Temu, the Deputy Prime Minister and Minister for Mines, then announced in June 2008 that the government had commissioned a study to be conducted by the Scottish Association of Marine Science to study the environmental impact of the Ramu Nickel project on the Basamuk area., following widespread concerns over the proposed deep sea tailings disposal system (see newspaper report). The Minister said all stakeholders including the Madang Provincial Government and Landowners, particularly those at Basamuk, would be given a full report on the findings after the study was completed. The Scottish Association of Marine Science was actually tasked to (1) provide a report on the effects of the submarine tailings disposal operations at Lihir and Misima, (2) to provide a baseline study as to the marine environment at Basamuk in Madang Province and (3) provide a set of guidelines for submarine tailings disposal in Papua New Guinea.
- 39 The Scottish Institute of Marine Science then in November 2008 ran a Deep Sea Tailing Placement Conference in Madang which according to a Post Courier report dated 11 November 2008, ended with calls for the National Government not to pursue the submarine tailings disposal option until all uncertainties were resolved. This was in response to the presentation of Draft guidelines and criteria generally for deep sea tailings disposal. The findings of the team as to the effects of tailings was NOT presented at all, as it was not completed nor intended to be so presented. The newspaper report also recorded the Governor of Madang as saying that the people are concerned and not satisfied with the current understanding of impacts on our livelihood and life and are not willing to accept the uncertainty of risks posed by deep sea tailings disposal.
- 40 As at March 2010 the Final report by the Scottish Institute of Marine Science had not been produced and made public by the government. However the government approved the tailings disposal without considering the final report.
- 41 The government has also approved coral blasting to make a route for the submarine tailings pipeline. It appears Telikom PNG was shocked to hear about the blasting.

#### **Telikoms concerns**

- 42 Telikom PNG and Pipe International are laying a new Fibre Optic Submarine Cable System between Sydney, Madang and Guam. This cable system is designed to be the principal gateway to the country for voice and internet traffic and through it will pass the majority of the country's e-business as well as tele-medicine and education data. The cable laying into and out of Madang was completed in 2009. Telikom PNG is extremely concerned about the stated plan to place 5 million tonnes a year totaling 100 million tones of tailing waste on the seabed in Basamuk Bay, as it could leading to conditions for a future slide of heaped tailings down the submarine slope leading to a break in the cable. Based on available science and reports, a report was compiled which sets out Telikom PNG's main concerns and the basis upon which the concerns are founded [link to pdf files of two pages from the report].
- 43 Even on MCC's own predictions, that the tailings will slide down a slope in a continuous coherent flow to deeper water, the risk of a massive turbidity current being triggered by a tectonic event

will be increased. In their Environmental Plan by NSR, terrestrial and seabed landslides, and earthquakes are considered a real threat

- 44 Such a turbidity current may be capable of breaking and washing away a section of the cable system. A similar turbidity current, generated by a tectonic event in the Luzon Strait in 2006 travelled 150 kms and broke a number of cables in the process.
- 45 If a break does occur, this would cause significant dislocation to PNG's telecommunications services while a specialist repair ship was brought to PNG to recover and replace the cable. Apart from the specific cost of the repair operation, the cost to the country in down-time would also be significant.
- 46 Given Telikom PNG's concerns they sent a letter in January to Dr Wang, the Technical Director of MCC Ltd and expressed their concerns, enclosing their report and requesting a meeting. Telikom met with Dr Wang and he stated that they were reviewing their tailings disposal options and disposal sites and would keep Telikom informed as to their progress.
- 47 Telikom were not contacted again by Dr Wang or anyone from MCC, so they were very surprised to see the newspapers reporting that MCC was to commence coral blasting.
- 48 In addition to the potential break in the cable Telikom are extremely concerned that the blasting program announced by MCC so as to facilitate the laying of the outfall pipe will adversely impact or disrupt the operations of the telecommunications cable.
- 49 As of March 2010 the Scottish Association for Marine Science, through Dr Tracy Shimmiel, the team leader for the report, stated that the draft final report was with MRA and the department of Environment and Conservation for comments and then once the comments have been communicated to her, the Final report will be sent to the department of Environment and Conservation.

#### **Arguments against allowing STD**

- 50 The government is allowing MCC to go ahead with its proposed deep sea tailings disposal plan despite
  - a) There being in existence a credible, unchallenged and independent report compiled by 4 individual reputable marine scientists that essentially finds there will be a lot of environmental harm if the tailings dumping goes ahead and that the Environmental Plan of the First Defendant is fatally flawed,
  - b) Objection by the National Fisheries Authority to the dumping as it will endanger fish resources
  - c) Well known findings by the World Bank Extractive Industry Report in 2003 that *"Submarine Tailings Disposal should not be used until balanced and unbiased research, accountable to balanced stakeholder management, demonstrates its safety. Whatever the outcome of the research, STD and riverine tailings disposal should not be used in areas such as coral reefs that have important ecological functions or cultural significance or in coastal waters used for subsistence purposes."*
  - d) The Government not having received and considered and made available for public consultation the independent report it commissioned in response to community concerns on deep sea tailings disposal
  - e) Serious concerns by Telikom as to the safety of its new cables which are the future of e-communication in PNG
  - f) The land disputes not being finalized and no proper consultation with landholders or disputing claimants, effectively depriving them of proper consultation and negotiations over their land, and
  - g) There being in existence alternative means of tailings disposal that would not pose such an ecological risk.