Whether waste incineration is a clean, environment friendly, resource saving approach is still disputable all over the world. Although waste incineration causes serious pollution, such as emission of dioxins, furans and heavy metals, seriously affect communities and environment, through the CDM a number of waste incineration projects have been approved. We consider it is incomprehensible.

Regarding the application of the “Fuqing Waste Incineration Project”, we argue that the discussion of baseline and additionality in the PDD is neither sufficient nor convincing. Furthermore, we think the statements that the incineration project improves the local environment, increases job opportunity, reduces coal–burning and is supported by local stakeholders needs to be seriously questioned.

Supported by the arguments below, the Wuhu Ecology Center and nine other Chinese environmental NGOs strongly recommend the rejection of this project under the CDM.

1. Insufficiency of alternate scenarios discussion

Under the CDM the developer is required to compare the proposed project with alternative scenarios: yet none of the described alternatives propose other means for handling the organic waste (methane-generating) (p.11), which is improper in current situation that MSW in China consists to more than 50% of organic waste (World Bank, 2005) and it would need more auxiliary fuel because of organic waste (see point #5 below). Animal feed, composting and anaerobic digestion are three proven, low-technology and low-capitalization means for handling organic waste and avoiding methane emissions. These should be considered alongside the development of recycling management systems. Especially in recent two years, central and local government has paid much more attention to organic waste disposal and waste recycling. Cities like Beijing, Guangzhou, Hangzhou begin to launch waste classification in communities: In the State Council routine conference held by State Council Premier Wen Jiabao on 23th March 2011, it is announced that waste classification would be launched and 50% cities with districts should achieve separated transportation and disposal of organic waste by 2015[1]. In this sense, waste classification and organic waste handling must be included in alternate scenarios. These two rational alternate scenarios have not been considered in the PDD, so the demonstration of baseline and additionality in this PDD is disconfirmed.

2. Insufficient demonstration of additionality

Back to 16th July 2007, the Department of Environment Protection in Fujian
posted the public announcement of the Environment Impact Assessment \[2\]; In June 2009, BOT Privilege Agreement of Fuqing Municipal Solid Waste Incineration Power Plant was officially signed\[3\]. In April 2011, the power plant was reported to be completed in June 2011 \[4\]. All the information reveals that this project has started before the approval date of CDM, indicating insufficient additionality. Meanwhile, the developer has not provided any document to demonstrate that the income of this CDM project has been examined with strict measures.

3. Questioning the statement of ‘Environmental sustainability’

3.1 Burning waste emits dioxins, which is a highly toxic substance and has become a serious phenomenon in China. In China, waste is not sorted before incineration, resulted in an increasing emission of dioxins from burning plastic wastes. Moreover, the kitchen wastes are more than half of all types of waste in China. According to the investigation results from the Environment Science and Engineering Department of Pecking University in 2008, the moisture content of waste in Beijing is 50.19 percent. The excessive amount of moisture lowers the caloric value of the waste and induces incomplete combustion, resulted in an increasing probability of dioxins emission. If detrimental waste is not excluded, flue gas and dust would pollute the environment during the incineration process. In addition, China has not established effective monitoring systems to address the dioxins emissions from waste-incineration. All the above is current situation of waste incineration power plants in China, which have already created substantial negative impacts communities and environment. However, such important background information has not been provided in the PDD.

3.2 The PDD says in p.62: “The major air pollutions are generated by the incinerator, including smoke dust, acidic gases, heavy metal and organic pollutants.” but the other pollutants such as dioxins, furans, PCBs (all of which are regulated under the Stockholm Convention), brominated and brominated-chlorinated aromatic hydrocarbons in the process of incinerating are not included in the PDD. In this sense, the PDD shows a total lack of scientific rigour when it states, “Environmental impacts of the Project are not considered significant” (p.63). The World Bank estimates that China’s push to increase waste incineration will double the global production of dioxins alone. These pollutants will have significant health impacts on the Chinese population as well as globally, because of the long-distance transport of some chemicals.

3.3 Burning waste also causes vast amounts of fly ash containing hyper toxic substances, which are particularly susceptible to dissolution in water, resulting in pollution of surface and ground water. It causes substantial influence on both environment and human health. Proper treatment requires vitrification in a high-temperature furnace not just solidification, which is not provided for under the PDD (p.63), followed by disposal in a hazardous waste landfill. It is not clear that the landfill is appropriate for hazardous waste management and it should never be used as construction materials as the project plans to do (p.63) as it may have very severe impact on human health and the environment. In China, fly ash treatment is difficult to establish and monitor. In November 2010, the Macaw Solid Waste Incineration
Power Plant, which has been considered as the prototype project of waste incineration power plant in China, was reported its fly ash scandal. Scandals like this are more likely to happen in the Mainland. On p.63 of the PDD shows “The slag could be removed and transported to landfill”, which also needs to be questioned or further explained in detail. Because during the incineration process, heavy metal is everlasting toxin, dioxins and furan are persistent pollutant. It is not clear that the landfill is appropriate for hazardous waste management.

To sum up, on p.3 of the PDD document, the statement “Environmental sustainability-The Project activity not only reduces GHG emissions it also reduces other harmful pollutants caused by landfill treatment and fossil-fuelled power generation, therefore, it will make significant improvement on local environment” does not sufficiently reveal the objective facts, and severely compromises the objective of the CDM to promote sustainable development.

4. Questioning the statement of ‘Economic sustainability’

Tens or hundreds of thousands of individuals make a living by recovering recyclable materials from municipal waste. Although their working conditions are often insalubrious, it is the best or only way of employment available to them. If the incinerator burns recyclable materials, they will lose even this livelihood. The PDD misleads the readers when it says that it achieves “Economic sustainability -Implementation of the Project will provide employment opportunities during project construction and operation stage and will therefore increase local residents’ incomes and improve their quality of life.” (p.3), as there is no mention about the number of people who will be deprived of their livelihoods. Moreover, the workers in incineration plant are exposure to the high-pollution and high-risk circumstances for a long time, so the statement that “improve their quality of life” is not true. Ultimately, this negative impact on employment is in no way consistent with the CDM’s goal of sustainable development.

5. Questioning the statement of ‘Resources sustainability’

5.1 On p.9 of the PDD it is stated “According to FSR, annual 385 ton diesel oil will be used.”, in fact much more fossil fuel may be used. Because the main content of waste in China is organic kitchen waste (Word Bank, 2005), according to a research done by the College of Environmental Science and Engineering, Peking University, 69.32% of the municipal waste in Beijing is kitchen waste, which caused 50.19% of water content. This has to some extend reflected the reality of the composition of waste in China. The calorific value of the municipal waste in China is low and the incinerators need to constantly feed in fossil fuel to sustain operation combustion temperature. The developer should be required to include scientific and reliable data about the composition of MSW in Fuqing city and provide a rigorous account of how much auxiliary fuel will be needed depending on the calorific value of MSW. The actual amount of fossil fuel needed based on the real quality of the municipal waste in Fuqing city shall be clearly explained.

5.2 With the incentive of national subsidy on electricity, the waste incineration
power plant will likely mix huge amounts of fossil fuel with the waste to maximize the profit. In the national regulation on waste incineration power generation project, it is clearly stated that coal as auxiliary fuel shall not exceed 20%. However, this PDD only mentioned “Compared with the energy generated by MSW, the energy generated by diesel oil is far less than 50%” (p.9), in addition that there is no third party monitoring to guarantee the proportion of fossil fuel would fulfill the national requirement and the commitment in PDD, in order to avoid the waste incineration to become a fossil power plant.

5.3 The current waste incineration is mixed-combustion. Recyclable resources such as paper and plastic will also be used as fuel. This not only results in waste of non-renewable resources, but will also increase GHG emission and energy consumption through the production of the materials which are supposed to be recycled. This part of emissions is not considered in the PDD. It is disputable to argue that such waste incineration power plants reduce overall GHG emission when the whole life cycle is considered. Wasting resources and indirectly increasing GHG emission violates the principle of sustainable development of the CDM.

To conclude, the statement “Resources sustainability –The Project will provide 87,703 MWh annually to the East China Power Grid …, which will lead to reduction in fossil fuel usage.” (p.3) is not sufficient.

6. Questioning the statement of ‘Stakeholders’ comments’

On p.63 of PDD file is information about the stakeholder consultation and their attitudes to this project. We have different opinions on several points. First, the PDD document does not include the methodology they use for stakeholder consultation. Second, 50 of them were investigated. The sample size is much too small to be representative and there is no further description of the sample sites. Third, the consultation result shows the support rate is 100% without any objections, of which the reliability is really worthy to be questioned. In China there are still many problems in environment impact assessment for waste incinerator projects, especially concerning the public engagement part. In 2010, an incineration plant in Qinhuangdao forged public opinion, while the residents around the plant require legal compliance.⁵ In June, 2011, the information on stakeholders consultation of an environment impact assessment report of the Beijing Suijatuo waste incineration plant proved to be false. Although the project has been questioned by environment NGOs, it was still approved by Beijing Environment Protection Bureau.⁶ Thus, in this context, we request more detailed submission of the investigation methods, the original document of participants’ information to prove the support from the stakeholders of this project.

Given the problems outline above, it is unacceptable for this PDD to maintain statements such as “Environmental sustainability” (p.3) or “Environmental impacts of the Project are not considered significant” (p.63) And it is highly questionable that “All of the respondents support the operation of the proposed project and 92% believe that the Project will contribute to the development of local economy and the improvement of the residents’ life. 94% of the respondents think the project will
improve the local ecological environmental conditions” (p.65).

Therefore it is the opinion and request of Wuhu Ecology Center that this project’s application for validation should be rejected, a request which is also supported by nine other Chinese environmental NGOs (see below).

Related information:
The following Chinese environmental NGOs support this comment:

安徽绿满江淮环境咨询中心
Green-An Hui Environmental Development Center

创绿中心
Greenovation Hub

道和环境与发展研究所
Institute of Environment and Development

达尔问自然求知社
Green Beagle

福建省绿家园环境友好中心
Fujian Green Home Environment-Friendly Center

绿色潇湘
Green Hunan

绿色浙江
Green Hangzhou

厦门市绿十字环保志愿者中心
Xiamen Greencross Association

自然之友
Friends of Nature

芜湖生态中心
WuHu Ecology Center