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FIGHTING HUNGER WITH HUMAN RIGHTS!

Comments regarding the Project design document (PDD) CDM (MDL, for its Spanish acronym) for the **Multipurpose Baba Hydroelectric Project (MBHP) located in the province of Los Ríos, Ecuador**

## A.2. Description of the project activity

The PDD states that the project activity aims to increase power generation in Marcel Laniado de Wind plant (MLW) by means of a new 42MW hydroelectric generation unit called "Central Baba"

According to the Description of the Project, developed by Efficacitas in its Environmental Impact Study, the project comprises a reservoir and a water transfer towards the Daule-Peripa reservoir. It also includes the construction of a hydroelectric power generation unit and its associated works of generation and transmission<sup>1</sup>. Thus, its main goal is not the hydroelectric power generation unit but the reservoir and water transfer. This defines the project as multipurpose, hence its name, Multipurpose Baba Project (MBP), although the PDD calls it Multipurpose Hydroelectrical Baba Project (MBHP).

On the other hand, on page 2 the PDD asserts that MLW has 213 MW of installed capacity and 90 MW of generation. However, MLW has an actual installed power of 65 MW per unit - as stated in the Hidronación Journal of March 25, 2008, which declares that "since March 10 2008, MLW has been generating 65 MW per unit, at its *maximum* capacity"<sup>2</sup>. In light of the foregoing, the generation of 602 GWh/year added to the National Interconnected System (SNI, for its Spanish acronym) by the MBP is an inconsistent piece of information.

Furthermore, MLW cannot work at full capacity permanently, since in the context of the Ecuadorian electrical market, the CENACE is the entity in charge of power dispatch by means of a model of Stochastic Dual Dynamic Programming (SDDP). This model analyses the joint operation of all plants in

<sup>1</sup> Efficacitas III. September 1<sup>st</sup>, 2006

<sup>2</sup> See also photos of the data in the MLW turbines plaques, where it may be noticed that the rated power - the value used for operation and statistics recognized by CONELEC- is of 65 MW.

the country, using the historical flow record to determine the prospective hydrological scenario affecting the operation of the interconnected system.

The decisions of the adopted programming model take into account the flow randomness and attempt to maintain the generation of reservoir power stations at levels which do not affect generation for lack of water in the future

According to CONELEC, the MLW average load factor for the period comprising the last 5 years is 30%, thus yielding a power value of 60 MW, less than the 90 MW value indicated in the proposal document. The 180 MW generation value estimated in the project derives from inconsistent premises, reaching at the most 140 MW, even if we consider “El niño” phenomena in 2002 when the MLW power station was able to generate at its maximum capacity and had a plant factor of 50.6%, which would produce 100 MW for the MLW power station and 30 MW for the new units.

Comparative chart between plant factor and power of HIDRONACIÓN AND HIDROPAUTE, by CONELEC statistics

	AVG YEAR	HUMID YEARS		AVG YEAR	DRY YEARS				GWh
Generated power HIDRONACIÓN (MMh)	545435.35	808105.37	944031.74	773817.59	594492.62	565977.00	562123.00	519880.00	664.23
Generated power HIDROPAUTE (MMh)	4792868.16	4163673.52	4524695.03	4570951.08	4737964.91	4632480.00	4628055.00	#####	4632.82
Plant factor HIDRONACIÓN (%)	29.23%	43.31%	50.59%	41.47%	31.86%	30.33%	30.13%	27.86%	35.60%
Plant factor HIDROPAUTE (%)	50.90%	44.21%	48.05%	48.54%	50.31%	49.19%	49.15%	53.22%	49.20%

The MBP expected additional generation of 602 GWh/year is not supplementary, given that it also includes the power generated by MLW in its maximum capacity, as in the year 2002. Thus, this data becomes inconsistent, as it does not match with the physical reality of the project (ibid page 2).

Concerning the innovative design mentioned in the PDD (page 3), it is incorrect to think that the transfer is from one basin to another, since both of them (Baba and Chaune rivers) are sub-basins of the Guayas river basin, and because they belong to the same region, they share the same seasonal characteristics in humid and dry periods. Besides, the assertion that MBP is the first project in the country to consider the transfer of water from one basin to another is untrue: since 2001 there has been a water transfer to Santa Elena, which is part of the Daule Peripa project which transfers water from the Guayas basin to the Chongón and Zapotal basins; and since 2004 there has been a water transfer from Daule Peripa to Poza Honda, in the Portoviejo basin, and from Daule Peripa to La Esperanza in the Carrizal-Chone basin.

### A.3. Project Participants

The PDD mentions Hidroeléctrica Nacional HIDRONACION S.A. as the sole project participant. However, the CEDEGE is in charge of the MBP as provided by the President of the Republic, by Executive 607 of September 7, 2007.

CEDEGE is the only shareholder of Hidroeléctrica Nacional HIDRONACION S.A.

#### A.4.2. Categories of the project

Even though the CDM categories do not include all the activities which may be undertaken by the MBP, since the project is not only hydroelectrical but also multipurpose, it should always be kept in mind that the project implies consumptive uses of water from the Daule Peripa reservoir, where the MLW plant is located. Those uses include irrigation, transfer to Santa Elena and human consumption in Guayaquil. Thus, this also involves social and environmental impacts.

#### A.4.4. About the estimated amount of emission reductions.

According to the final MLW project (213 MW), the firm energy is similar and equal to 503 GWH from the original project (130 MW) (Assessment of the Hydrological Regional Plan, page 31, *Plan Integral de Gestión Socio Ambiental para la Cuenca del Guayas y Santa Elena PIGSA*, Caura Fagromen Consortium / Cedege, 2001).

The expected additional generation of 602 GWh/year of the MBP becomes inconsistent, as it does not match with the physical reality of the project (page 7 of the document) and with the reasons detailed in A.2. Therefore, the calculated emission reduction of 330,000 tCO<sub>2</sub> per year is lacking in substance, since the provided data has no suitable validation.

#### A.4.5. Concerning the public funding.

It has not been noted that the public entity *Instituto Ecuatoriano de Seguridad Social* (IESS for its Spanish acronym)<sup>3</sup> provided 40 million dollars for the project by means of the securitization of prospect flows which the MLW put on sale in the Stock Exchange. The IESS purchase consisted of two series with terms of 10.5 and 8 years, respectively<sup>4</sup>.

#### B.2. Concerning the Justification of the methodology and its applicability to the project.

The generation increase in MLW by modifying the operational regime, thus seeking to increase electricity generation, depends not only on CENACE - the entity which determines the starting up of the turbines - but also on the consumptive uses of water from the Daule Peripa reservoir, given that the flows spilt for generation might not be used for irrigation and human

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<sup>3</sup> The IESS has the duty to protect the urban and rural population -whether employed or not- with regard to the eventuality of disease, maternity, occupational hazard, disability, unemployment, disability, old age and death, according to the provisions in the Law of Social Security. <http://www.iess.gov.ec/site.php?content=292-quienes-somos>

<sup>4</sup> <http://archivo.eluniverso.com/2006/10/06/0001/9/73E0D90E7A8147C3A07A3992BDCE6F8B.aspx>

consumption. Note that currently, the use of the yearly turbinated water in dry periods downstream of the reservoir represents less than 35%.

On the other hand, the hydroelectric power generation unit located at the end of the water transfer from Baba to Daule Peripa, hence situated in another sub-basin, will not be available throughout the year but only in rainy seasons. Thus, according to the MBP design data (page 8), there is a risk that during dry seasons the required minimum flow of the Baba Quevedo river will be jeopardized.

MBP does not meet the ACM002 applicability conditions detailed in the project for the following reasons:

- MBP does not constitute a MLW retrofit, but a 42 MW Baba generator unit, located not in the Baba river basin but in a river in the Daule Peripa reservoir tail end, thus comprising the MLW hydroelectrical complex. Besides, according to design data, the modification of the estimated operational regime is not completely attributable to the 42 MW unit, which will start in a seasonally short period.
- The existing reservoir will not certainly increase its area, but it will maintain its hypereutrophic environment, generating Greenhouse gasses from the organic sediment discharge that originated in the reservoir surrounding area. In Daule Peripa the concentration of dissolved O<sub>2</sub> at a certain depth is 1.5mg/l, which hinders the existence of marine life. At 8-10 meters depth the concentration is reduced to 0.1 mg/l and from 10 meters depth onwards the concentration is reduced to almost zero (see Manejo Ambiental del Embalse Daule Peripa, page 289, Agencia Española de Cooperación Internacional AEI, CEDEGE, June 1993). Up to 2007, these values must have changed for the worse. Emissions of CH<sub>4</sub>, N<sub>2</sub>O and sulphidric acid, far from decreasing, will increase due to the contribution of the Baba reservoir, which will maintain a strong anthropic activity in the area and will spill organic components, causing an O<sub>2</sub> decrease produced by the fall of the renewal rate of water and CO<sub>2</sub> emission due to the reservoir's environmental change into an hypereutrophic one.
- The calculation of power density should be based on other formulations and fundamentals because the new reservoir is intended for transfer only, as the new generator units are placed within the MLW plant. Therefore, the criterion is not sufficient to meet the conditions of applicability.

### B.3. Concerning the sources and gasses

In table 3 shown on page 9 of the PDD, the justifications and explanations do not match reality, since as it has already been said, the emission levels of CH<sub>4</sub>, CO<sub>2</sub> and N<sub>2</sub>O are maintained by the activity of MLW and would be increased for the reasons mentioned above (PDD, Page 9)

#### Sub-step 1b.

There is no consistency between laws and regulations, as the CONELEC approved the EIA for the building of a generation unit, not for the Baba reservoir. In the same irregular manner, the Environmental Ministry approved an environmental licence which is currently being sued in Court by those affected by MBP<sup>5</sup>.

#### Sub-step 3a.

##### 3. Barriers to financing

The project has not been developed with public funding only, since on May 3, 2007, the Inter-American Development Bank (IDB) granted a complementary credit line of 87.8 million dollars to the project when there already existed a strategic partner via a trust fund<sup>6</sup>.

In the Ecuadorian legislation, everything done under the Law may also be undone under the Law, but this fact is not applied in the cases of trusts and strategic partnering, because these have not been legally settled, and the BID line of credit is still maintained despite Government judicial orders which also have not been applied under new documents that support the legality of the changes.

To date, financing has not been made publicly transparent.

##### 6. Design Barriers

The data regarding technical problems related to mechanical properties of soils and the definite project have not been available to the citizens. It's hardly surprising that the solution to these problems of soils should be an excuse for increasing the water content of MBP - a practice already carried out by CECEGE in the Daule Peripa project since "the height of the Daule Peripa reservoir was increased from crown elevation 75 to elevation 85, duplicating the reservoir volume"<sup>7</sup>, while the building process had already been initiated according to the approved final project.

All the calculation steps for baseline emissions detailed from page 23 onwards are not applicable due to the inaccurate validation of the data and parameters used.

#### D.1 About Environmental Impacts

PEIAD and DEIAD were not prepared in a participative manner. Since 2002, the citizens who would be affected in Patricia Pilar have been independently

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<sup>5</sup> <http://www.aida-americas.org/aida.php?page=1&lang=es>

<sup>6</sup> Diario Hoy. May 3, 2007. <http://www.explored.com.ec/>

<sup>7</sup> Evaluación del Plan Regional Hidráulico para la Cuenca del Guayas (PRH for its Spanish acronym), page 31, Plan Integral de Gestión Socio Ambiental para la Cuenca del Río Guayas y Península de Santa Elena (PIGSA for its Spanish acronym), Consorcio Caura-Fagromen/CEDEGE, 2001

investigating the project and its impacts. The experiences of those who had been affected by the Daule Peripa reservoir were useful to present strong arguments and to warn Patricia Pilar citizens about the MHBP consequences: diseases, loss of lands, poverty, lack of compensations, and loss of way of life.

In the DEIAD presentation on September 6, 2006 in Buena Fe, the social sectors announced that the peasants, who were the actual affected people, were absent<sup>8</sup>.

In the meeting, the consulting firm Efficácitas acknowledged that the Baba reservoir would only control flooding up to the south of Buena Fe. Overflowing of the river in Vines, Palenque (Los Ríos), Salitre, Vernaza, and Samborondón (Guayas) would not be prevented.

### E.1. About the Stakeholders' comments

As shown in the process in which MHBP has been involved, the affected population was not properly informed and consulted. Planning, design and socialization stages were done behind closed doors: The consultants interviewed 35 arbitrarily chosen people: representatives of governmental entities, unions, social and educational organizations and directly affected people. Only one workshop was held.

Most of the peasants directly or indirectly affected by the project were not consulted. On the contrary, the police suppressed them using tear gas during a demonstration in which they demanded to be informed about the advances in the project research<sup>9</sup>.

In reality, the changes in the original design - reduction of the drown area, number of people to be resettled, loss of lands and affected public infrastructure - resulted more from social pressure than from the goodwill of Hidronación. However, the definitive design has never been made public, even after having been changed.

In May 2006 CEDEBE, Odebrecht and the government signed the contract without the final plans and designs. Moreover, the inhabitants of Patricia Pilar remained excluded<sup>10</sup>.

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<sup>8</sup> El Comercio. September 8, 2006 "Proyecto Baba: Los estudios concluyeron"  
[http://elcomercio.terra.com.ec/solo\\_texto\\_search.asp?id\\_noticia=40327&anio=2006&mes=9&dia=8](http://elcomercio.terra.com.ec/solo_texto_search.asp?id_noticia=40327&anio=2006&mes=9&dia=8)

<sup>9</sup> El Comercio. November 16 2005 "Nueva protesta contra el Proyecto Baba"  
[http://www2.elcomercio.com/solo\\_texto\\_search.asp?id\\_noticia=7220&anio=2005&mes=11&dia=16](http://www2.elcomercio.com/solo_texto_search.asp?id_noticia=7220&anio=2005&mes=11&dia=16) (Consulted on August 24, 07)

Diario Hoy (2005) "Opositores a presa Baba cierran vía en Los Ríos" November 16, 2006. Diario Hoy. [www.explored.com](http://www.explored.com) (consulted on August 24, 2007)

<sup>10</sup> Dinero. Diario de Negocios. "El Proyecto Baba se paraliza hasta nueva orden"  
[http://www.hoy.com.ec/NotiDinero.asp?row\\_id=268818](http://www.hoy.com.ec/NotiDinero.asp?row_id=268818)  
El Comercio. November 21, 2006 "La presa Baba sigue en debate"

Owing to the magnitude of the conflict - caused by the exclusion of the affected people in the decision-making regarding MHBP - the Ombudsman's Office intervened as a mediator between the settlers in opposition and the entities promoting the project (CEDEGE and Odebrecht) at the end of 2006. The Ombudsman's Office called for two meetings; however, none of the representatives of the mentioned entities were present. The peasants were ignored one more time<sup>11</sup>.

A public consultation regarding the MHBP has never been called by the government or the building company.

MHBP has never been referred to as a Clean Development Mechanism.

Up to the end of 2007, the peasants kept requesting the project final design, but were still ignored. The Minister of Energy and Mines himself felt compelled to request the suspension of paperwork since he considered the project not to be of multiple uses, but rather of "multiple abuses"<sup>12</sup>. "The reservoir building works, which began in November 2006, still lack the 'Detailed Engineering'". The building company ODEBRECHT is still drilling boreholes and carrying out geotechnical reports. This verification worried the authorities, since a \$208,000,000.00 (two hundred and eight million dollars) building work was contracted without the corresponding research, design and final plans<sup>13</sup>."

Within this context, the assertion that the Environmental Licence granted by the Ministry proves that they adopted adequate procedures in community participation is untrue. The affected people were excluded, the interviewees were arbitrarily chosen, and the announced project was different from the one which is currently being built<sup>14</sup>.

According to the previously discussed reasons, MBP cannot be considered a project that contributes to the country's sustainable development, given that the communities' right to prior and informed public consultation - a

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[http://www2.elcomercio.com/solo\\_texto\\_search.asp?id\\_noticia=49610&anio=2006&mes=11&dia=21](http://www2.elcomercio.com/solo_texto_search.asp?id_noticia=49610&anio=2006&mes=11&dia=21)

<sup>11</sup> El Comercio. December 8, 2006 "Baba: no hubo otra audiencia"

[http://www2.elcomercio.com/solo\\_texto\\_search.asp?id\\_noticia=51751&anio=2006&mes=12&dia=8](http://www2.elcomercio.com/solo_texto_search.asp?id_noticia=51751&anio=2006&mes=12&dia=8)

La Hora December 8, 2008 "Otra vez burlados" Printed journal.

<sup>12</sup> El Comercio. May 25, 2007. "El proyecto hidroeléctrico Baba entra en una fase de revisión"

[http://www.elcomercio.com/solo\\_texto\\_search.asp?id\\_noticia=73740&anio=2007&mes=5&dia=25](http://www.elcomercio.com/solo_texto_search.asp?id_noticia=73740&anio=2007&mes=5&dia=25)

<sup>13</sup> Ministry of Energy Report. Monday, May 28, 2007

<http://www.presidencia.gov.ec/noticias.asp?noid=9653>

<sup>14</sup> In March 2008 Odebrecht restarted the works. On June 9, 2008, representatives of the building company announced that a 30% of the work had been completed. El Comercio June 9, 2008 "El proyecto hidroeléctrico Baba registra un adelanto del 30%"

<http://www.conelec.gov.ec/contenidos2.php?id=755&idiom=1&tipo=4>

constitutional right in Ecuador and a defining aspect of sustainable development - was denied.

For more information:

**Comisión Agua Tierra y Vida.** (2007) "Informe falencias técnico - ambientales, irregularidades en los procesos legales y violaciones a los Derechos Humanos del proyecto Baba"

**CORRAL, Luis** (2006) "Sembrando desiertos. La deuda social y ecológica generada por el endeudamiento externo en el Proyecto de Propósito Múltiple "Jaime Roldós Aguilera" " Acción Ecológica. Quito. 77 p.

**CHUM A. y Landívar N.** (2006) *La lucha por el agua de las comunidades ribereñas de la cuenca del río Guayas*. FIAN Reports. [www.fian.org](http://www.fian.org) (consulted on March 2007)

El Comercio February 7, 2006 "EL Proyecto Baba, de nuevo en el debate"  
[http://elcomercio.terra.com.ec/solo\\_texto\\_search.asp?id\\_noticia=15933&anio=2006&mes=2&dia=7](http://elcomercio.terra.com.ec/solo_texto_search.asp?id_noticia=15933&anio=2006&mes=2&dia=7)

El Comercio June 23, 2006 "La presentación del proyecto Baba creó una mayor polémica"  
[http://elcomercio.terra.com.ec/solo\\_texto\\_search.asp?id\\_noticia=31732&anio=2006&mes=6&dia=23](http://elcomercio.terra.com.ec/solo_texto_search.asp?id_noticia=31732&anio=2006&mes=6&dia=23)

El Comercio August 26, 2006 "Los líos por el proyecto Baba se agudizan"  
[http://elcomercio.terra.com.ec/solo\\_texto\\_search.asp?id\\_noticia=31732&anio=2006&mes=8&dia=26](http://elcomercio.terra.com.ec/solo_texto_search.asp?id_noticia=31732&anio=2006&mes=8&dia=26)

El Comercio September 8, 2006 "Proyecto Baba: Los estudios concluyeron"  
[http://elcomercio.terra.com.ec/solo\\_texto\\_search.asp?id\\_noticia=40327&anio=2006&mes=9&dia=8](http://elcomercio.terra.com.ec/solo_texto_search.asp?id_noticia=40327&anio=2006&mes=9&dia=8)

El Comercio November 21, 2006 "La presa Baba sigue en debate"  
[http://www2.elcomercio.com/solo\\_texto\\_search.asp?id\\_noticia=49610&anio=2006&mes=11&dia=21](http://www2.elcomercio.com/solo_texto_search.asp?id_noticia=49610&anio=2006&mes=11&dia=21)

El Comercio December 8, 2006 "Baba: no hubo otra audiencia"  
[http://www2.elcomercio.com/solo\\_texto\\_search.asp?id\\_noticia=51751&anio=2006&mes=12&dia=8](http://www2.elcomercio.com/solo_texto_search.asp?id_noticia=51751&anio=2006&mes=12&dia=8)

El Comercio May 25, 2007 "El proyecto hidroeléctrico Baba entra en una fase de revisión"  
[http://www.elcomercio.com/solo\\_texto\\_search.asp?id\\_noticia=73740&anio=2007&mes=5&dia=25](http://www.elcomercio.com/solo_texto_search.asp?id_noticia=73740&anio=2007&mes=5&dia=25) (consulted Aug. 31 07)

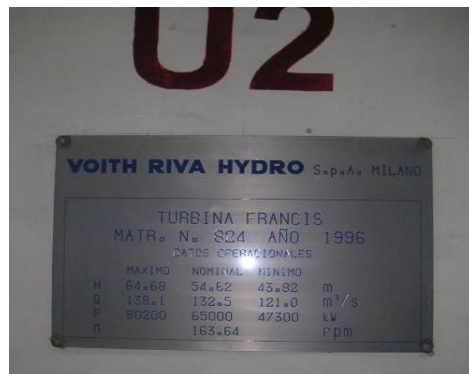
El Comercio June 6, 2007 "El Gobierno analiza el proyecto Baba".  
[http://www.elcomercio.com/solo\\_texto\\_search.asp?id\\_noticia=75429&anio=2007&mes=6&dia=6](http://www.elcomercio.com/solo_texto_search.asp?id_noticia=75429&anio=2007&mes=6&dia=6)



Diario Hoy (2005) "Opositores a presa Baba cierran vía en Los Ríos" November 16, 2006. Diario Hoy. [www.explored.com](http://www.explored.com) (consulted on August 24, 2007)

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ANNEX



Turbines of Marcel Laniado de Wind Plant. The plaques indicate a maximum capacity of 64.68 (FIAN's file)



March 18, 2007. Assembly gathered against the MBP in the parish Church of Patricia Pilar (FIAN's file)