

CHAPTER FIVE

SPECIFIC MEDIA STRATEGIES APPLIED BY THE DAM ADVOCATES TO JUSTIFY THE GREEN BELT DEPOPULATION POLICY

After describing the general media strategies applied by the dam advocates, in this chapter I will describe six media strategies that they adopted for the specific purpose of obtaining public approval for the green belt depopulation policy. Those six strategies consisted of first, appealing to agronomical arguments, second, appealing to hydrological arguments, third, appealing to the rule of law, fourth, appealing to moral virtues, fifth, appealing to the pride of the Central Java people, by claiming Kedungombo to be the first Indonesian reservoir with a "people's managed" green belt; and sixth, obscuring the private business companies that were interested in investing in Kedungombo.

Appealing to agronomical arguments

Even before the Kedungombo dam was built, a notion was systematically constructed that the valley impounded by the reservoir was very arid or barren. In 1983, a Semarang daily stated that in one of the villages that was to be inundated, the villagers were willing to be resettled, because their soil was infertile due to limestone and rocks. It did not explicitly say whether *all* 22 villages that were to be inundated had the same type of soil. The article's subtitle, "The Villagers of Lorog Willingly Release Their Land For the Sake of Prosperity" (*Suara Merdeka*, 10 Oct. 1983), clearly impressed its readers with the overall willingness of the villagers to sacrifice their ancestral land. Less than a month later, another article in the same newspaper stated that transmigration was indeed the best solution for the people of those 22 villages, "because the area to be inundated consists of barren soil, on which one can definitely not rely" (*Suara Merdeka*, 6 Nov. 1983).

In 1989, an article in a Jakarta news weekly stated that the area around the prospective reservoir was "indeed poor." It had yellow limestone soil, with no irrigation channels, resulting in a low productivity of only 4 tons of rice per Ha. Therefore, the local people only grew coconuts (*Tempo*, 25 March 1989). In the next year, a Jakarta afternoon daily stated that the soil in the transmigration site where Kedungombo villagers were resettled was more fertile than in the area inundated by the Kedungombo reservoir, which contained limestone (*Suara Pembaruan*, 7 July 1990). Again, during the weeks before and after the dam's inauguration, the media repeatedly stressed how barren the river valley was, before its impoundment.

Ali these media articles focused the readers' eyes on the hills around the reservoir, most of which had indeed been stripped of their teak forest cover. These articles seldom touched upon the conditions of the river valley before the impoundment. They did not question why the Serang river valley was so densely populated, if this riparian ecosystem was indeed so unfertile. One article that did touch upon the condition of the valley floor, stated that the reservoir would raise the ground water table, so that the villagers would not have to dig their wells as deep as before (*Panji Masyarakat*, 1-10 April 1989).

Very few writers challenged that media strategy, which one may call "disseminating the myth of the barren river valley." In 1989, a Satya Wacana Christian University researcher, Tri Kadarsilo, recalled that before the impoundment, ten villages in the Kemusu subdistrict in the Boyolali district had fertile soil, because they were located in the alluvial low valley of the Serang River. Small portions of the land of nine villages in the Miri subdistrict and four others in the Sumberlawang subdistrict in the Sragen district

lay in the fertile valleys of the Serang and Uter (Nguter) rivers. Other villages affected by the reservoir and the dam were located on the slopes of the Kendeng mountains, which were indeed covered with granite and limestone.

Disregarding the variety of soil types, the government set a uniform land compensation rate for all the land affected by the reservoir in all three districts — Boyolali, Sragen, and Grobogan. This policy dissatisfied the inhabitants of the Kemusu subdistrict in Boyolali, who refused the government's compensation offer and searched for legal means to raise the compensation rates. Some villagers in the Miri subdistrict in Sragen also did the same, according to Kadarsilo, but were less vigorous than the Kemusu people, and finally accepted the government's unilaterally determined compensation rates (Kadarsilo, 1989). Kadarsilo's article, which was the first publicized attack on the myth of the barren valley, did not reach a wide audience, however, since it was only published in a small campus newspaper and consequently did not reach the general public.

Two years later, Mangunwijaya challenged the myth of the barren valley in the mainstream media. The German-trained architect confirmed the popular idea that the mountains around the reservoir were covered by limestone, which was only suitable to grow teak or other tree crops. However, he claimed that in the valleys at the foot of those mountains, where the Kedungombo people used to live in a density of 860 to 1,000 persons per Km², the soil was very fertile. Before the construction of the dam, land prices in those valleys ranged between Rp 2,500 to 3,000 per m². Therefore, he criticized the World Bank for allocating only a Rp 25.9 billion compensation budget for 5,390 families, whose 6,207 Ha of land was appro-

priated. With that low budget, each family was only able to purchase 0.16 Ha of new wet rice fields of the same soil qualities as their inundated land (*Berita Nasional* , 24 Febr. 1991; *Suara Pembaruan* , 3 March 1991).

Mangunwijaya's statement is supported by two pre- and one post-impoundment studies. The pre-impoundment studies were carried out, respectively, in 1977 by the Social Sciences Research Institute of the Satya Wacana Christian University in Salatiga, and in 1984 by researchers from the Institute of Ecology of the Padjadjaran University in Bandung. The post-impoundment study was carried out in 1989 by a researcher from the Development Study Center of the Bogor Institute of Agriculture. According to Padjadjaran University researchers, "the area largely consisted of dry fields with limestone formation which is less fertile, and easily eroded" (Institute of Ecology, 1984, 3-9). They described Kedungombo's former agro-ecosystem in detail. The people grew rice in their wet ricefields (*sawah*) during the rainy season. They grew other staple food crops, such as maize, cassava, and taro, in their dry gardens, and they grew vegetables and fruit trees in their home gardens. On the following pages, the report stated that "though most people use traditional agriculture System, some people made terraces on their agriculture land and grow plants on the edges of the terraces, which could support soil and water conservation efforts." Among the trees planted were teak and sonokeling (*Dalbergia latifolia*), two common tree species used in the government's reforestation and greening schemes in Java and Sumatera.

The valley's population density, as documented by the Satya Wacana Christian University researchers (LPIS-UKSW, 1978b: 45), is presented as Table 5 (p. 122). Their report shows that Mangunwijaya's estimates of

Table 5.

Population density and agrarian population density of the 22 villages
before the impoundment of the Kedungombo reservoir (July 1977)

No.	Name of village	Population density (persons/Km ²)	Agrarian population density (pcrsons/Krn ²)
Boyolali district:			
01.	Kcmusu	473	1,452
02.	Gncngsari	520	1,232
03.	Klewor	724	1,034
04.	Nglanji	767	1,101
05.	Ngrakum	459	996
06.	Sarimulyo	697	718
07.	Wonoharjo	225	765
08.	Watugcdc	330	681
09.	Bawu	1,026	1,355
Sragen district:			
10.	Lorog	434	562
11.	Porangan	407	409
12.	Pilangrembes	474	481
13.	Gilirejo	363	382
14.	Soko	739	771
15.	Bagor	412	417
16.	Ngandul	658	821
17.	Pendem	437	449
18.	Ngargotirto	315	413
19.	Ngargomulyo	385	597
20.	Boyolayar	269	494
C. Grobogan district:			
21.	Rambat	398	957
22.	Kalangbencar	514	1,103

Average population density in the entire reservoir area: 473 persons/Km²

Average agrarian population density : 724 persons/Km²

Source: LPIS/UKSW, 1978. p. 45.

Table 6.

Agro-ecosystem. of the 22 villages before the impoundment
of the Kedungombo reservoir area (August 1977)

Name of Rice Fields Village -----		Dry Fields	Home Gardens	Forest	Others
	Irri- gated (Ha)	Rain- fed (Ha)	(Ha)	(Ha)	(Ha)
Boyolali District:					
Kemus	123	62	73	531	4
Genengsari 30	121	99	69	432	4
Klewor 12	54	98	67	95	4
Nglanji	94	173	116	160	7
Ngrakum	82	103	68	289	8
Sarimulyo	61	64	93		6
Wonoharjo	10	333	129	1,129	6
Watugede	63	161	63	301	4
Bawu	109	117	11	70	6
Sragen District:					
Lorog	24	200	112	22	77
Porangan	24	477	110	-	2
Pilangrembes -	54	311	133	-	7
Gilirejo	92	454	116	-	36
Soko 10	226	42	132		21
Bagor	87	425	96		7
Ngandul	146	147	69	27	62
Pendem 15	150	492	65		20
Ngargotirto	47	528	156	225	5
Ngargomulyo -	59	236	17	150	22
Boyolayar	19	275	40	271	7
Grobogan District:					
Rambat	54	167	58	390	1
Kalangbancar -	38	146	44	256	2

*) "others" consists of cemeteries, roads, rivers, grassfields.

Source: LPIS/UKSW, 1978, p. 24.

population densities of 860 to 1,000 persons per sq Km were quite close to the pre-impoundment data. The report also presented a baseline picture of the agro-ecosystem of the inundated villages. According to this study (LPIS-UKSW, 1978b: 24), in 1977, the 22 villages had an agro-ecosystem, as described in Table 6 (p. 123). Villagers in the river valleys farmed about 1,800 Ha of rice fields. These rice fields were mostly rain-fed, but the alluvial soil's fertility and irrigation facilities enabled year round rice farming of 376 Ha of rice fields in four villages in Boyolali and three villages in Sragen. This was confirmed by the Bogor Institute of Agriculture researcher, who reported that 15 Ha of pump-irrigated rice fields in Klewor had been inundated (Saharuddin, 1989: 5).

Nevertheless, the most decisive evidence for shattering the myth of the barren valley was the determination of many Kedungombo villagers' to remain on the reservoir's banks. Even during the long drought of 1991, they were able to raise more crops than were the villagers who had resettled beyond the reservoir's green belt in the three resettlement schemes built by the government. And, while the villagers who stayed on the reservoir banks could still survive from their crops, the inhabitants of those resettlement schemes had to depend on the government's food aid.

Appealing to hydrological arguments

Hydrological arguments, focusing mainly on the needs for flood control and erosion control, were the favorite arguments used by the Kedungombo dam builders to highlight reasons for the depopulation of the reservoir's green belt. In early November 1987, the dam's project officer, Meduk Subiyanto, stated that the local villagers living in the reservoir area had to be relocated, regardless of whether the water would reach their

houses, because the reservoir had to have a green belt. The green belt would function to support the flow of water into the reservoir (*Pelita* , 2 Nov. 1987).

In March 1989, when asked by the press why he had banned Mangunwijaya from helping to save the Kedungombo children, the Central Java governor also put forward a hydrological argument. He said that the area had to be vacated. "If not, the reservoir could be ruined," stated Ismail (*Kompas* , 15 March 1989). Two years later, the Jratunseluna Project general manager, Soenarno, found it necessary to counter Mangunwijaya's suggestion to forget the whole green belt concept, which the priest regarded as "too theoretical" and "only nonsense." "It is easy for Father Mangun to talk like that, because he obviously does not understand the PMF (Probable Maximum Flood) theory. If a big flood does happen, does he want to be responsible for the consequences?" commented the hydraulic engineer (*Suara Pembaruan* , 21 March 1991).

This hydro "logic" was not used only by the engineers. It was also a popular rhetorical weapon of many lay bureaucrats and officers. The Public Relations officer of the Boyolali district government, Soebardjo, for instance, once stated: "So far, the green belt location is not yet dangerous. But later it could become very dangerous, because the water can rise to that level" (*Suara Merdeka* , 9 February 1991).

Linguistically, hydrological arguments were popularized by the media by using the term "flood area" (*daerah genangan*) to encompass the entire area around the reservoir, which had supposedly been purchased by the Public Works Department. This popular term combined two entirely different areas -- the drawdown area and the green belt —into one entity. The major difference between these two areas is that the drawdown area is normally

underwater during the rainy season, while the green belt is normally dry, except during probable maximum floods (PMFs), which may only happen once in 20 to 100 years.

The impression one may attain from reading those articles is that the water level of the Kedungombo reservoir could rise in perpetuity. The literature, as well as common sense, proves that impression to be incorrect. According to current technical regulations, large dams are designed to deal with probable maximum floods (PMFs) in the shortest possible time. Those PMF designs are warranted in situations where (1) the number of people exposed to flooding is such that the potential loss of life due to dam failure is unacceptable; (2) there is potential for catastrophic economic loss; (3) loss of some unique social or environmental resource is anticipated which is not replaceable by money; or (4) the political consequences are unacceptable (American Society of Civil Engineers, 1988: 17).

In most instances, those PMF designs include an emergency spillway to release the excess water from the reservoir in the shortest time possible. Without those emergency spillways, not only would the population around the reservoir banks be exposed to danger, but also the population living downstream of the dam. In the case of Kedungombo, the dam would not have passed national and International inspections if it had not had such an emergency spillway. In fact, the dam's emergency spillway, in the form of open channel, could release water if the reservoir reached the 90 meter elevation with a capacity of 4,450 cubic meters per second.

As the Kedungombo dam builders themselves promised, "the emergency spillway, with a 250 m crest length, combined with the Service spillway, will discharge the probable maximum floods without overtopping the

dam" (Institute of Hydraulic Engineering and SEATEC, 1988: 3-30). And even if a dam's emergency spillway is blocked by trees, boulders, mud, or any other material carried by the flood, the dam's reservoir water level cannot rise higher than the highest elevation of the dam, namely 96 m. The notion that the reservoir's water could continue to rise above the height of the dam was simply nonsense.

Apart from flood control arguments, the exclusion of local villagers from the green belt was repeatedly portrayed by the dam's engineers and the local government officials as necessary to reduce the degree of erosion and sedimentation into the reservoir. This argument was even advanced by Emil Salim, a Berkeley-trained economist who had held the position of Indonesia's Environment Minister (*Panji Masyarakat*, 11-20 August 1991). The Minister's statement was politically very meaningful, because it placed the authority of his office behind those who used the ecological argument.

Actually, blaming the displaced villagers as the main culprits of the erosion, sedimentation, and silting of the reservoir was grossly exaggerated, if one studies reports written by consultants and engineers associated with the Public Works Department. In 1985, an article in the Department's Journal mentioned that in the entire Jratunseluna region, annual erosion in the Serang river valley was the lowest, namely 1.6 mm per annum. That was based on data collected by the Jratunseluna Project up to 1979 (Hamam, 1985: 28-29). Since then, erosion in Kedungombo's 614 sq. Km watershed could have increased or even decreased. A 1983 paper by a World Bank consultant who had been involved in the preparation of Kedungombo, put the erosion rate of the dam's catchment area at 3 mm per annum (Graybill, 1983: 1247).

How would that erosion rate affect the reservoir's lifetime? A simple formula presented by the general manager of Jatiluhur dam, Sufrarti Atmakusuma, answers that question. According to Atmakusuma, the life time of a reservoir (T) equals the reservoir's dead storage capacity (V), divided by the reservoir's catchment area (L), multiplied by the annual erosion in that area (Atmakusumah, 1984: 20). Or, symbolically,

$$T = \frac{V}{L \times S}$$

where

V = dead storage capacity or volume;

L = water catchment area, or watershed;

S = annual erosion in the watershed; and

T = reservoir's life span.

So, since Kedungombo's dead storage capacity is 88.4 million cubic meter (mcm) and its watershed is 614 sq. Km, then, at the erosion rate of 1.6 mm per year, the reservoir's lifetime will be

$$\frac{88.4 \times 1,000,000 \text{ m}^3}{614 \times 1,000,000 \text{ m}^2 \times 0.0016 \text{ m/year}} = 89.9837, \text{ or } 90 \text{ years.}$$

At an erosion rates of 3 mm per year, Kedungombo's lifetime will only be reduced to 48 years. Based on those calculations, there is no need to worry about the sedimentation rates, since government officials have repeatedly stated that, technically and economically speaking, the dam's lifetime should be between 30 to 50 years.

To understand how the media distorted the displaced villagers' contribution to the reservoir's total potential sedimentation, let us take a closer

look at Kedungombo. The actual area impounded by the reservoir at the full supply level of 90 meter elevation was 46 sq. Km. The total land appropriated amounted to 61 sq. Km. Hence, the green belt area was part of the 15 sq. Km extra uninundated land acquired by the project, although it did not cover that entire area. According to an official source, the entire green belt was 12.6 sq. Km in area, 52% of which, or 6.6 sq. Km was still managed by the State Forestry Company (Perum Perhutani). The remaining 48 %, or 6 Km² (Biro Penelitian, 1991: 77), was the green belt land contested by the project and the villagers. The total watershed area was 614 sq. Km, more than one hundred times this contested green belt segment. Yet the people who eked out a meager living from this small piece of land were portrayed as bearing the main burden of safeguarding the reservoir from erosion originating from the entire watershed.

Hence, one cannot possibly hold the 22 village communities, who previously lived in the Serang river valley and only recently moved uphill onto the reservoir banks, accountable for *all* the sedimentation carried into the reservoir. Simple calculations, based on Atmakusuma's formula, can prove this point. The green belt area inhabited by these communities was only 6 sq. Km. Even if none of the displaced villagers had transmigrated, and even if the erosion rate in this green belt area were 3 mm per year, it would still take 4,911 years to fill Kedungombo's 88.4 mcm dead storage capacity.

During all those years of covering the Kedungombo controversy, the media never published an inquiry into the ratio between erosion from the entire watershed and erosion from the reservoir banks. The media also never published an inquiry concerning the ratio of Kedungombo's inhabited banks to its uninhabited banks. Finally, the media very rarely published in-

quiries into the pre- and post-impoundment agricultural practices of the villagers to determine whether they were ecologically responsible farmers.

Only after the Indonesian Islamic Scholars Association (ICMI) interfered briefly in the dispute did a Muslim magazine publish a defense of the villagers' eco-agricultural wisdom. In an interview with that magazine, Mangunwijaya stated that, "If it is trusted to the farmers, the costs to develop the green belt would be much cheaper, and the environment would also be well kept. That area can be inhabited by about 2,000 people, who can establish their terraced rice fields there" (*Panji Masyarakat*, 1-10 June 1991).

Appealing to the rule of law

Since hydrological arguments seemed to be mostly an insiders' language, the more popularly used arguments to discourage local villagers from settling around the reservoir were of a legal nature. The taboo for villagers to settle around the reservoir was constructed more from repeatedly reciting statements by authoritative persons than from exposing the laws and regulations that might be able to support those claims.

Only on May 14, 1991, Governor. Ismail stated that the existence of the green belt was based on Law No. 11 of 1974, which stated that the green belt was needed to secure the reservoir. He made that statement in the presence of the Jratunseluna Project's general manager, Soenarno (*Kedaulatan Rakyat*, 15 May 1991).

Meanwhile, the media had linguistically endorsed all those statements by repeatedly referring to the green belt as the "forbidden area." Probably, since it was so often repeated by engineers and officials, the media workers themselves might have believed that there were indeed laws and regulations that explicitly forbade the local villagers from inhabiting and

cultivating the reservoir banks. And, by eventually referring to the green belt interchangeably as the "forbidden area," the media perpetuated a notion that still had grounds for doubt.

However, after interviewing lawyers at the Directorate General of Water Resources Development (Irrigation) of the Public Works Department, as well as from studying the relevant laws and regulations, one can conclude that reservoir green belts do not necessarily have to be depopulated.

Contrary to what Ismail had stated, Law No. 11 of 1974 on Water Resources Development, does not contain any clause on reservoir green belts. Neither do two Government Regulations (PP = *Peraturan Pemerintah*) that cover dams and reservoirs, PP No. 22 of 1982 on Water Management and PP No. 23 of 1982 on Irrigation. Two technical regulations on the construction of dams and weirs, issued by the Public Works Minister in 1987 and 1990 (Badan Penerbit Pekerjaan Umum, 1987 and 1990), also contain no clause on green belts.

The use of the term "green belt" (*sabuk hijau*) in Indonesian legal papers was actually very recent. It was first mentioned in PP No. 35 of 1991 on River Management, ratified by President Soeharto on June 14, 1991, two and a half years after Kedungombo's sluices had been closed. In Point 17 of this regulation it is stated that the protection of reservoirs includes the protection of their green belts. But even that regulation does not rule out the existence of local villagers on those green belts. In the explanation of that regulation it is stated that "decisions about green belts are made by the competent authorities, based on *social* , economical, technical, and environmental considerations" (emphasis added). Note that "social considerations" were men-

tioned as the first to be taken into account by authorities when deciding reservoir's specific green belt policy.

With the ratification of PP No. 35/1991, the governor's statement that Kedungombo's green belt policy was based on Law No. 11 of 1974 became legally incorrect, because the Indonesian legal system adopted the principle that, in specific cases, the application of specific laws and regulations overrules general laws and regulations, or in legal language, *lex specialis derogat lex generalis*.

Prior to the ratification of that government regulation, which, among many other things, covered reservoir green belts, the Public Works

Department had only issued one specific regulation for a specific reservoir green belt. On December 18, 1988, the Public Works Minister issued a decree to establish a green belt for the Karangates reservoir in East Java. That reservoir's green belt encompassed about 215 Ha of land, which had been acquired by the Public Works Department from the residents of 15 villages in

District of Malang. Based on that minister's decree, a decree of the Governor of East Java, issued on March 18, 1988, declared the Karangates reservoir's green belt a protected forest (*Pekerjaan Umum*, May 1988).

Probably, the engineers involved in building and operating the Kedungombo dam, who had formerly worked with the Brantas River

Director in charge of the Karangates dam, tried to follow the Karangates policy too rigidly. But even at Karangates, the inhabitants of the original villages along the reservoir's periphery were not forced to transmigrate. The

Director cooperated instead with a local research institute to guide the village in building low-cost housing around the reservoir (Suryono, 1977:

The Jratunseluna Project's own management plans for Kedungombo's green belt were also much more tolerant toward the displaced villagers, compared to the authorities' zealous drive to vacate the entire green belt. One report, for instance, stated the following concerning the reservoir's green belt:

Green Belt Elevation 90 - 95 m

The objective of the Green Belt is to provide a mainly vegetative buffer zone between the reservoir and surrounding agricultural or forestry land which will act as a conservation measure to reduce erosion and inflow of sediment into the reservoir, *but will permit continued use of scarce farming land where possible.*

Existing areas of stable land use within the Green Belt (terraced agriculture on slope <20%) will receive supplementary planting of forage grasses and legumes with some improvement of terrace bunts if needed to control run-off. Unterraced cropland with slopes <15% will be contour planted with forage grasses and legumes interspersed with fruit trees. *Cultivation of agricultural land will be permitted under supervision of local hamlet administration provided conservation planting is maintained.*

Ali untterraced land with slope >15%, and areas of former PT Perum Perhutani land, will remain in permanent vegetation, if necessary supplemented by contour planting of forage grasses and legumes. Cultivation will not be permitted. Small areas of existing erosion will be planted with banana and bamboo to stabilize soil.

The work will be undertaken by contract employing labour from within the adjacent villages. *Priority for employment will be given to landless persons from the inundated area and adjacent villages* (Indah Karya and SMEC, 1989: 13-14). (Emphasis added).

Even drawdown⁶ farming, which was also regarded as *a* mortal sin by some local officials (*Kartika* , 1 August 1991), had been anticipated by the dam builders, as expressed in another report:

6) The drawdown area is the part of the reservoir periphery which is exposed during the dry season, or when the water of the reservoir is released for irrigation. Hence, drawdown farming or drawdown agriculture refers to the agricultural activities carried out by local farmers during those times of the year.

Drawdown Agriculture

Chances are that drawdown agriculture will be practiced in the reservoir drawdown area fringe zone, similar to the experiences at Saguling. From the WQ [Water Quality] point of view, the main problem will be surveillance to prevent improper use of agricultural Chemicals which would contaminate the KO reservoir water. This work would be part of the responsibility of the continuing monitoring to be conducted by the JOWQE [Jratunseluna Office for Water Quality/Environment] (Institute of Hydraulic Engineering and SEATEC, 1988: 7-3).

Hence, the image of the green belt as a "forbidden area" was actually more of a fabrication by the authorities, reinforced by the unknowing media, than a concern based on real, undisputed laws and regulations. Many media workers might not have studied the laws and government regulations concerning green belts. They also might not have access to the reports that were cited earlier. They took the words of the World Bank and government officials for granted.

Appealing to moral virtues

Appealing to moral virtues was another media strategy often applied by the dam advocates to underline the importance of clearing the entire reservoir bank from the displaced population. The two most popular variants of this strategy were first, linking the moral appeal with the fear of the reservoir's treacherous waters, and second, linking the moral appeal with the responsible use of public funds.

It was not hard for the authorities to link the moral appeal with the alleged danger of the reservoir's treacherous waters, since many media reports on Kedungombo were already promoting that fear. Besides calling the reservoir banks a "forbidden area," many media reports also called it the "danger area," or *daerah bahaya*. Sometimes, the "treacherous nature" of the reservoir was highlighted by photos and their captions. The caption of a

photo of a villagers' hut near the reservoir in *Kartika* , April 1, 1991, for instance, carried this message:

Children play cheerfully, without bearing the burden of life. They never think that the reservoir's water can every second wipe out and drown their houses.

Such a statement was misleading. As discussed in the section on appealing to hydrological arguments, there are limits on how high a reservoir's water level can rise. However, without exposing the PMF (probable maximum flood) precautions built into Kedungombo, the authorities and the their media supporters only highlighted the danger of the treacherous water. For instance, one press article used the term "*nekad* ", or reckless, to describe villagers who refused to move from the reservoir banks (*Suara Merdeka* , 9 Febr. 1991; *Merdeka* , 7 March 1991), without investigating whether they were in immediate danger, or not.

Statements that linked the moral appeal with the proposed danger of the treacherous waters was repeatedly expressed by Colonel Imam Soetopo, the commander of the Surakarta Army garrison. The commander and his troops did not have the heart to watch the villagers living in constant danger, said the Colonel (*Kompas* , 26 Febr. 1991). When his troops helped 25 families move from the green belt to the military-built barracks, the commander said: "They are also our brothers and sisters. If they suffer from living in the flooded area, we are obliged to help them" (*Suara Karya* , 4 March 1991). Then, during a press tour to show 35 journalists what the military had done for the displaced villagers, he said: "We feel grieved to see the condition of the people, constantly threatened by drowning, because the reservoir water keeps rising. As a part of this nation, the Indonesian Armed Forces (ABRI) cannot sit still to see its own people suffer like this" (*Kompas* , 30

^1). Pnar to that, his statement, 'The military are always sensitive to problems faced by the people,' had already become a title in a report special civic action of the Army (*Wawasan* , 12 March 1991)-

Ar.c-ir.er form of appealing to moral virtues was to stress the response to use the public funds that had been invested in the dam in an effective manner. Proceeding from the hydrological appeal, discussed earlier, the logic goes as follows: if the villagers continue to live in the green me ^servorr's sedimentation will increase. If that happens, then the s span will decrease. If that happens, then the public funds, were znsily ioans, will not be used effectively and efficiently. Hence, 23 pnbhc funds responsibly, the remaining villagers should be relocated ~ away as possible from the green belt to prevent erosion and sedimentation. This line of thinking was repeatedly expressed by the authorities ■2S as me mecia. Governor Ismail, for instance, while su^esdng that he rot '_se ire term "green belt," "red belt," or even "silver belt," stated ir-zi tre bcctom rr.e was 'how to save the people's money' (*Wawasan* , 14 May 1991)

Appealing to the pride of the Central Java people to the persistence of about 600 families, who insisted from 1989 "Z— m innaniting and cultivating the flatlands around the reservoir, 2 nally gave in. This change of the government's policy •jess ncc nms.a. _y dedared by the Public Works officials in charge of Ked— by an o:5dal of the Forestry Department. According to head of the Forestry Department's Central Java representative Management of the Kedungombo green belt by the local «5 fee rrs: case of its type in Indonesia. Until then, green belts had

been managed by the Forestry Department, said Sutanto in a seminar
orga-

nized by the Eleven March State University (UNS) in Solo last January
(*Suara Merdeka*, 15 Jan. 1992).

This statement, which appealed to the pride of the Central Java people, was definitively incorrect. There were several other dams in Indonesia where the displaced villagers were allowed to inhabit and utilize their green belts. One of them was Wadaslintang, another irrigation dam in Central Java built and operated by the Public Works Department. In fact, Wadaslintang was repeatedly mentioned as a model for Kedungombo by G. Budihardjo, the UNS professor in charge of regreening the reservoir's green belt and upland area (*Kedaulatan Rakyat*, 22 Jan. 1991, 18 May 1991).

This claim was confirmed by a former project manager of the South Kedu Irrigation Project, Suryadi, who had been in charge of Wadaslintang and an older dam, Sempor. In Sempor's green belt, the Project planted seedlings of coconut, certain fruit trees, such as mango, and even lucrative clove trees. The Project chose those fruit trees not only because thousands of coconut seedlings were donated by the Central Java governor, Supardjo Rustam, but also because the villagers would be more motivated to take care of those trees. The villagers as well as the project employees were allowed to harvest the fruits from those trees. "If we had only planted firewood trees, the villagers might not have been motivated to take care of them, and would have chopped them for firewood," said Suryadi.⁷

Apart from Sempor and Wadaslintang, the Gajah Mungkur dam in Central Java also had a "people's managed" green belt. In 1981, additional measurements of landholdings around the Gajah Mungkur reservoir were

carried out by the Land Use Service of the Wonogiri district. The Solo River

Project had decided to create a green belt around the reservoir, with elevations from 138.3 m to 140 m above the sea level, and stretching 25 to 200 m from the shore, which was initially intended to be completely depopulated. That meant that a total addition of 1,650 households would have to be displaced.

However, after two years, the owners of the nearly 900 Ha green belt land had still not been compensated. Since they had been told that the reservoir would flood more land, many villagers had hastily sold their properties to buy new land in the surrounding villages. Although some villagers eventually transmigrated to Sumatera, many of them moved in with neighbors and relatives. Due to the project's delay in paying the compensation, these villagers had not been able to pay the full price for the land in the nearby villages after the sudden demand for land increased the local land prices.

Expressing the needs of the villagers who refused to transmigrate, in early May 1983, Sukarmo, the village head of Boto in the subdistrict of Baturetno, wrote a letter to the Solo River Project manager, who was in charge of the Gajah Mungkur dam. The village head urged the project manager to pay compensation to 69 Boto residents had been impoverished by the green belt decision. On June 1, 1983, sixty seven Boto residents wrote another request to the government to pay fair compensation for their properties in the green belt, signed with their thumb prints. Suyem, a female Boto villager, traveled hundreds of kilometers from her transmigration site in Bengkulu (Southern Sumatera) to join that campaign.

In the following years, about 1,800 households continued to inhabit Gajah Mungkur's green belt and cultivated that stretch of land plus the reservoir's 5,000 Ha drawdown area, as well as fished in the reservoir. Their refusal to transmigrate was rewarded. The project's failure to depopulate the green belt was partly because the project did not have enough funds to compensate and resettle the thousands of villagers, and partly because the villagers had arranged "under-the-table" sharecropping deals with the 236 green belt supervisors (*.Topik* , March 1981; *Suara Merdeka* , 28 March, 21 April and 16 June 1983; *Tempo* , 28 May 1983).

Probably, the Project could not have enforced a depopulated green belt policy, because hydraulic calculations of the reservoir showed that the reservoir bank dwellers were not directly in danger of floods, which would only rarely reach the 139.1 m extra flood water level (EFWL) during which the dam's spillway gates would have to be opened completely regardless of flooding in the downstream area. In fact, as an Indonesian hydrologist admitted, the reservoir flood storage capacity was slightly oversized (Sutadi, 1982: 7071). This overpurchase of land from the villagers for incredibly low prices made it a lucrative commodity for local officials to resell to private companies.

Apart from those Central Java dams, the Saguling and Cirata hydro power dams in West Java were also classical examples of a symbiosis between dam builders and local villagers. These West Java hydro power dams were also financed by the same multilateral development bank involved in Kedungombo, namely the World Bank. With the technical assistance of the Padjajaran University Institute of Ecology, the State Electric Company (PLN), which built and operated the dams, permitted the displaced villagers to use

the dams' green belts, drawdown areas, and waters. That policy was adopted by PLN, in spite of the fact that both reservoirs' shorelines were longer than the Kedungombo shoreline. Saguling and Cirata's shorelines were respectively, 450 Km and 200 Km. The Saguling and Cirata dam operators had no difficulties tolerating the local villagers' use of their reservoirs' green belts and drawdown areas, because Jatiluhur, an older dam located downstream on the same river, had already adopted the same policy (Tjitradjaja, 1987 and 1989). In fact, the Saguling project's first agri-aquaculture trials were carried out in Jatiluhur in 1981-1982 (Soemarwoto, 1989a and 1989b).

Besides those examples in Java, the Riam Kanan reservoir in South Kalimantan is another example of reservoirs where the existence of the displaced villagers in its green belt was tolerated. On the periphery¹ of this reservoir - the largest in Indonesia - were twelve villages inhabited by the original people of the Riam Kanan valley, who were displaced by the reservoir in the early 1970s. Their existence in the reservoir green belt was not actually welcomed by the National Electricity Company (PLN), the operator of the Riam Kanan hydropower dam and its reservoir, who preferred that a 500 meter wide green belt around the reservoir be free from inhabitants.

Pressure to remove the original Riam Kanan valley inhabitants from the reservoir's watershed was not only exerted by PLN, but also by the Forestry Department. Based on decree No. 10/KPTS/Um/I/1975 of the Minister of Agriculture, the entire watershed of the Riam Kanan was turned into a protected forest. Obviously, this policy collided with the Riam Kanan villagers' need for agricultural land. The indigenous villagers, who had lost all their land in the early 1970s, were often blamed for the frequent forest fires in the Riam Kanan watershed, that regularly devoured the young pme

saplings planted by the Forestry Department. However, PLN, as well as the Forestry Department, simply could not evict all the indigenous Riam Kanan inhabitants from the reservoir's watershed.

Probably to make up for the widespread manipulations in compensation for the displaced villagers in the early 1970s, the local government became the main supporter of the indigenous Riam Kanan people. All the original villages of the displaced Riam Kanan people were officially recognized by the local government, which entitled them to the subsidies provided to all villages in Indonesia. Their official status became even stronger after the twelve Riam Kanan villages were split off from their former sub-district to form a new subdistrict, with the addition of two villages near the dam. The formation of this new Aranio subdistrict by the national government was legitimized by Government Regulation (PP) No. 43 of 1986. In mid 1991, this new subdistrict had a population of 7,523 persons (*Banjarmasin Post*, 19 June 1991).

After this legal recognition by the Department of Interior, two International agencies provided their assistance to the displaced Riam Kanan villages. The Ford Foundation initiated social forestry pilot projects in two native Riam Kanan villages, Kalaan and Belangian, in cooperation with the provincial office of the Forestry Department (Program Perhutanan Sosial Daerah Kalimantan Selatan, Kantor Wilayah Departemen Kehutanan Propinsi Kalimantan Selatan, 1988 and 1990). And the Asian Development Bank provided a loan to the Banjar district's Plantation Service to enable Riam Kanan villagers to farm 700 Ha of rubber plantations (*Banjarmasin Post*, 13 Nov. 1991).

Many problems still had to be solved in Riam Kanan. The original Riam Kanan villagers continued to campaign for the titles of the land that they had occupied for the last twenty years (*Dinamika Berita* , 19 Dec. 1990). Meanwhile, the authorities tried to reconcile the 1986 legal recognition of the Aranio subdistrict with the 1975 Agricultural Minister decree, which turned the entire Riam Kanan watershed into a protected forest, and the 1974 Water Resources Law and 1982 Government Regulation on Irrigation, which provided the legal bases for the management of the Riam Kanan hydro power and irrigation reservoirs. To solve those legal conflicts, a special seminar was held in Banjarmasin in mid-June 1991 (*Banjarmasin Post* , 16 and 18 June 1991; *Dinamika Berita* , 19 June 1991). In general, however, the presence of villagers in Riam Kanan's green belt was much better accepted by the local government than in the case of Kedungombo.

Obscuring private Business interests

In response to charges by dam critics who alluded that the eviction of the villagers might only be a "hidden social engineering tactic" to prepare the reservoir's shoreline for private businesses, Governor Ismail repeatedly stated that he had no intention yet to invite businesses to invest their money in the reservoir. "That is to prevent the local people from becoming onlooking bystanders," said Ismail to the media, who were purposefully invited to his official residence (*Kedaulatan Rakyat* , 15 April 1989; *Wawasan* , 15 May 1991). Despite those assurances, a joint venture between Indonesian and Swedish companies, Aquafarm Nusantara Ltd, had actually already begun a fishery operation in Kedungombo (*Berita Nasional* , 20 April 1991).

This company was not a newcomer in Central Java's freshwater fishing industry. With its headquarters in Singapore and branch offices in

Surabaya, Jakarta, and Solo, it first only ventured in the business of selling a brand of fish food, "Gold Coin." Its owner or majority shareholder was Rudolf ("Rudy") Lamprecht, a Singapore-born Swedish man. This fishery specialist seemed to be well-connected with the officials of the provincial Fishery Service, as well as with the Department of Fishery at the Diponegoro State University in Semarang, where he had held seminars on growing cat fish and the larvae to feed this fresh water scavenger.

After being in the business of fish food for a while, Rudy became interested in breeding the red variety of a lucrative freshwater fish species, *Tilapia nilotica*, which in Indonesian is called *nila merah* ("red nila"). This interest developed, after the red *nila* replaced a saltwater fish variety, the red *kakap*, on the Japanese consumers' dining table. To experiment in raising the export quality of red *nila*, he looked for fresh water bodies, which were relatively mud free. Large reservoirs provided excellent conditions for that particular purpose.

Rudy's intentions received the sympathy of provincial Fishery officials. He was allowed to carry out his first experiment in the Gajah Mungkur reservoir in Wonogiri district, Central Java. According to an agreement with the district head, Aquafarm had to carry out that experiment in cooperation with the already existing fish farmers in that large reservoir. According to this so-called "nucleus estate and smallholders" system, Rudy had to provide every farmer with a floating fish net, fingerlings, fish feed, and his or her wage as well. In return, those farmers had to sell their product to Aquafarm Nusantara.

Guaranteed by this monopoly, Aquafarm Nusantara was in less than a year able to export 50 ton of red nila raised in Gajah Mungkur to Japan

(*Konipas* , 27 April 1991; *MerJtbi*, 3 April 1991, 18 May 1991). The nucleus company had seven groups of farmers under its control. Every group consisted of ten farmers. Most of those farmers were retired civil servants, who had turned to fish farming in their old days, with government bank loans which they could not repay. So, in reality, it was the company which was calling the shots, after bailing all those unprofessional fish farmers from their debts, and with its own personnel supervising most of the fish farming activities.

Aquafarm Nusantara's fish farming success in Gajah Mungkur ushered it smoothly into the Kedungombo waters (*Bernas* , 20 April 1991). It was granted a 81 Ha concession to install floating fish pens in Kedungombo.

With its convenient location in the Purwosari Plaza shopping center in the city of Solo, its field supervisor, Freek Hunsken, a Dutch man, could easily drive to both reservoirs.

Since this company was already present in Kedungombo, while the Governor had stated that no investors had been allowed yet to operate in the reservoir, some justification needed to be found, to legitimize the private Company's presence in the reservoir. That opportunity came with a visit of two World Bank consultants to Kedungombo after the dam's inauguration. According to two local newspapers, the World Bank officials made inquiries to the provincial government, as to whether Aquafarm Nusantara was welcome to a nucleus and smallholders fishery project' in Kedungombo. In response to that question, the newspapers reported that the Secretary of the Provincial Government, Wahyudi stated that, in principle the Central Java provincial government would not reject investments from third -ar-

ties, as long as they were oriented toward increasing the local people's welfare (*Kartika* , *Suara Merdeka* , 21 June 1991).

It was still questionable whether the World Bank officials had really endorsed Aquafarm Nusantara's presence in Kedungombo, because in a March 1989 report of a World Bank mission to Kedungombo, the Bank suggested that "the ownership of floating nets would be restricted to individuals who lost assets due to the reservoir being filled" (World Bank, 1989: 19). Anyhow, by the time the World Bank personnel visited the reservoir and allegedly asked about the company's presence, Aquafarm Nusantara had already expanded its operation from Gajah Mungkur to Kedungombo.

Meanwhile, the reservoir's waters were also being cleared of local villagers, to increase the prospective tourists' comfort. A disaster in a smaller reservoir in Central Java provided a political leverage for the authorities to clear Kedungombo's waters from uncontrolled local boats. On April 17, 1991, sixty five villagers drowned in Malahayu. For more than three months, most of the major newspapers and magazines covered this disaster, stressing the potential lessons to be learned. One of those lessons, which was repeatedly stressed by the media, was that the government should strictly regulate the licences for boats allowed to serve as public transportation 'on that reservoir. Lessons learned from the Malahayu incident were soon extrapolated by the media to Kedungombo.

In other words, the Malahayu incident gave the government a justification to step up the drive to regulate water transportation on Kedungombo. This drive involved three aspects. First, it involved the regulation of the boats and canoes, to determine whether they were "lake worthy," or not. Second, it involved the regulation of the boat operators and canoe paddlers,

by issuing "driving licences" and "paddling licences." Third; it involved the regulation of various lucrative tourist spots, especially Mount Kemukus, a former mountain that had turned into an island. It was the site of an obscure sex tourism, since the former mountain top was the site of the graves of a runaway prince, Pangeran Samudra, and his stepmother *cum* lover, Raden Ayu Retno Ontrowulan.

After the Malahayu incident, Ismail frequently commented on those regulatory steps that had to be taken to prevent a Malahayu incident from occurring on Kedungombo. He stated that the boats operating on Kedungombo had to be tested, and when they were not "lake worthy," they had to be pulled out from the reservoir. After they had been repaired, those boats could then be allowed to sail on the reservoir again. Ismail also stated that the paddlers of the canoes, which were used to transport passengers as well as cargo, had to be trained and provided with a sort of "paddling licence, to make them responsible for the safety of the passengers that they were transporting. He specifically emphasized the need to register and evaluate all the boats and canoes that were involved in ferrying the tourists to and from Kemukus (*Wawasan* , 15 May 1991; *Suara Merdeka* , 30 May 1991).

Prior to the Malahayu incident, two local newspapers covered the unrest among local boat owners caused by the Sragen district government policy to grant a monopoly over the lucrative Kemukus tourist ferrying business by holding a tender for a Rp 35 million rent. Only the company that could pay that amount of money to the Sragen government could monopolize the Kemukus ferrying business (*Kartika* , 5 April 1991; *Wawasan* , 11 May 1991).