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# Poor Countries Need Relief from the World Bank's 'Help' on Malaria

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## Abstract

The World Bank attempts to improve health in poor countries by providing advice in health financing and infrastructure development, as well as grants and loans to poor countries. This is a formidable mission given that the greatest difficulty poor countries have in carrying out public health programs is their lack of infrastructural, managerial and clinical capacity. Its efforts to this end have been diluted by irresponsible forays into disease control financing without a commensurate increase in institutional competence with only limited technical staff capacity. Instead of deferring to the World Health Organization for technical advice on malaria control, Bank staff members have promoted ineffectual malaria prevention and treatment, causing countries to move away from best practices in disease control. The Bank has been criticized in the Lancet medical journal, and its senior staff claim that changes have been made. This working paper reviews the most recent performance from the Bank, which demonstrates the continuing failure of its malaria work. The Bank should stick to its core mission of funding health systems and get out of the disease control business.

## Introduction

To understand the Bank's mission creep into disease control it is important to understand that the World Health Organization (WHO), until 2006, had failed to respond adequately to the treatment and prevention of most infectious diseases, notably malaria, in the developing world.

The WHO established strong credibility in its first thirty years by coordinating mass campaigns directed at the worst scourges. These 'vertical' operations gathered experts in particular diseases to design programs and then sent them to recipient countries to supervise and train local people to administer vaccines, sprays, drugs, and other medications.<sup>1</sup> For example, using indoor residual spraying (IRS) with DDT, the WHO spearheaded massively successful malaria eradication campaigns in the Caribbean, Southern Europe and parts of Asia through the 1950s. Additionally the WHO led the smallpox eradication campaign from 1967 to 1980.

Since the early 1980s however, the WHO has been torn between its presence in the field, tackling disease, and its role as a standard-bearer, offering advice and advocating for sound technical practice.<sup>2</sup> Suffering from mediocre leadership, financial mismanagement and confusion about its strategic direction, the Organization has gradually weakened. As a result, the Bank, assisted and advised by the WHO, wrested the initiative from the WHO on many health matters and drifted into the realm of public health and diseases programs, further clouding the lines between their core missions.

Politicization at both agencies has undermined confidence in their respective expertise. In the 1980s the WHO bowed to public outcries against top-down donor programs and environmentalists' concerns about insecticides by de-emphasizing IRS in its malaria control recommendations<sup>3</sup>. The Bank joined the WHO in sidelining IRS by stigmatizing DDT and dismantling the malaria control programs it directly funded. But malaria rates soon rose<sup>4</sup> and continued to rise for many years as both agencies were paralyzed by the fear of causing offence to their western constituencies.

## Discussion

### Failures of the Roll Back Malaria Partnership

Rather than redressing these fundamental missteps on malaria control, the Bank and the WHO eventually conceived a multilateral initiative in 1998—the Roll Back Malaria (RBM) Partnership. This program aimed to halve malaria deaths globally by 2010 but failed to establish baseline rates for morbidity or mortality. It also limited the scope of its operations for vector control to funding insecticide-treated nets (ITNs) in order to stem infections and to providing drugs to treat them. The various RBM partner donor organizations largely outsourced project implementation to third-party consultancies on a semi-commercial basis. Available evidence, although still patchy and unreliable, suggests an increase of malaria prevalence in sub-Saharan Africa.<sup>5</sup> WHO's own conservative numbers reveal that an estimated 10,000 pregnant women and up to 200,000 infants continue to succumb to the disease each year as a result of malaria infection during pregnancy.<sup>6</sup>

The failure of RBM to reduce the burden of malaria is based on the inherent problems with mass ITN distribution campaigns, such as those endeavored by the various RBM partners, and an ill-conceived treatment-focused strategy. Ensuring that nets are delivered to those who need them, that they are hung properly, are actually used and that they are not damaged, have been enduring problems for malaria control programs. Although ITNs have recently been developed to remain active for up to five years, the majority of the nets distributed to date by RBM partners has either been untreated with insecticide or have required annual re-treatment. Finally, children and pregnant women—those worst affected by malaria—must remain under the nets all night during the stifling summer heat to get any protection.

Aid agencies have ignored these facts and have continued to publish the number of nets distributed<sup>7</sup> rather than the number used by the target population, which can often be as little as ten percent. By continuing to justify the primacy of ITNs in prevention strategies this way, even as malaria rates have increased, the Bank and the WHO have avoided tackling the underlying inefficiencies of local health systems that must be improved to undertake IRS. While Washington-based contractors can easily pass out nets, IRS requires efficient vertical management structures as well as robust local systems.

RBM partners were similarly blinkered in their approach to the case management of malaria. The WHO initially recommended the cheap anti-malarial drug chloroquine (CQ) for RBM partners, even though the deadliest form of malaria, *P.falciparum*, had long since developed widespread resistance to the drug. Donors were loath to fund artemisinin combination therapies (ACTs) as they cost up to ten times as much as CQ, and so RBM balked at pressing reluctant African governments to incorporate ACTs into their national malaria treatment policies. RBM only came around in 2004 when they were shamed into doing so by the scientific community and concerned activists.<sup>8</sup>

### The Bank's Confusing Role

The Bank's systems-building operations are overseen by the Health, Nutrition and Population (HNP) division and cover lending, analysis, and technical assistance. HNP could be more of a valuable resource for developing countries but many of its staff members are talented people in the wrong jobs, such as medical doctors or epidemiologists who really belong at the WHO.<sup>9</sup> As a Bank economist anonymously told me, "We all know that project concepts are most strongly influenced by the expertise of those managing the projects."<sup>10</sup> Thus with an influx of epidemiologists and medical doctors to the Bank, disease control programs have been increasingly selected to the detriment of projects favoring systems development; and it's the latter that many countries require most.

Even where priorities align with local needs, project design is often lacking. An example is the Bank's fragmented efforts to reduce mortality rates by increasing the use of health services among the poor. These projects often focus on constructing or refurbishing clinics and hospitals and improving geographic access to them. However from the project assessments there is no way to tell if these buildings are staffed, stocked with drugs and other medical supplies, if they have electricity or clean running water, if the people

running the buildings are assisted in any way, and ultimately if any lives are saved or improved among the poorest.<sup>11</sup>

Concerns about poor systemic coordination of public health facilities are not absent from reports produced by the Bank's own research arm; the HNP task managers are either unable or unwilling to heed such advice. Nor are reports of client preference for Global Fund to Fight AIDS, TB and Malaria (GFATM) grants over Bank grants and credits for the procurement of anti-malarial drugs, ITNs and other commodities absent from the Bank's internal strategy documents from August, 2004.<sup>12</sup> The documents admit not only that clients perceive the process of securing Bank funds as cumbersome and politically touchy, but also that the Bank has been making a weak and haphazard effort to uphold its end of RBM.

Other independent sources have also captured the concern that the Bank is not achieving its core mission. In the *Journal of the Royal Society of Medicine*, two authors assessing the Global Fund say: "Although systems strengthening was never excluded as an area of funding, it was only in the fifth round of requests for proposals for the Global Fund included a fourth explicit cross-cutting category of 'Health System Strengthening.'"<sup>13</sup> Where its core mission is concerned—health system development—the Bank's job is far from done. The Global Fund staff has no desire to creep into health systems development, but it is being asked by developing countries to help with this. They should stick to their job of financing medicines and leave the plentiful work of systems development to the Bank.

#### The WHO Evolves While the Bank Stagnates

The RBM Partnership has failed because its constituent members have not reinforced their respective roles and comparative advantages in fighting the disease. The Bank is culpable for the above reasons, but its contravention of WHO's guidelines makes it perhaps the most egregious RBM member. Since heading up the WHO's Global Malaria Program late last year, Dr. Arata Kochi has taken key steps to improve WHO's technical role in malaria control, by reissuing WHO's guidelines for case management and IRS by emphasizing ACTs and DDT, respectively.

The authors of a paper published in *The Lancet* medical journal earlier this year revealed that in addition to committing only US \$150 million of its promised US \$500 million for malaria control, the Bank continues to promote CQ in India as a presumptive treatment in spite of *P. falciparum* resistance rates as high as 50 percent, and without knowledge that testing for malaria type is routine.<sup>14</sup> The Bank defended its contravention of WHO treatment guidelines by pointing to CQ's effectiveness against less deadly forms of malaria there.<sup>15</sup> CQ still has a role in India, but only if testing is routine; the Bank could make that happen, but it has neglected to do so.

Even after admitting its failure to deliver malaria financing since 2000 and taking a withering hit in *The Lancet* for its scientific errors, the Bank continues to finance and author scientifically flawed projects, further demonstrating a mix of intransigence and incompetence. The HAMSET<sup>16</sup> (HIV/AIDS, Malaria, STDs and TB) and HAMSET II<sup>17</sup> projects in Eritrea and the Philippines National Sector Support for Health Reform

Project<sup>18</sup> provide ample evidence. In both cases, the Bank ignored each country's historical success using insecticides to control malaria, and recommended that IRS be phased out in favor of ITN distribution. The Government of Eritrea sensibly ignored the Bank's advice, increasing the amount of IRS with DDT and other insecticides used in HAMSET and subsequently bringing malaria incidence down by 83%.<sup>19</sup> Yet in HAMSET II, the Bank inexplicably claimed that "studies have shown [IRS] to be of questionable value in parts of the country",<sup>20</sup> and persisted in its advocacy against IRS. While this blinkered insistence seems to reflect an indefensible ideological bias, the Bank's choice of malaria treatment in both projects makes technical incompetence a more likely culprit. The Bank financed CQ+SP combination in HAMSET II as a first-line malaria treatment,<sup>21</sup> explicitly violating the WHO's guidelines; its minuscule earmark for treatment in the Philippines Health Reform Project (approximately \$185,000)<sup>22</sup> is most likely supporting the government's CQ+SP combination policy in that country as well.

If the relationship between the Bank's bald, technical incompetence and the potential for needless childhood deaths due to malaria remains in question, the Benin Malaria Control Support Project makes it perfectly clear. Here the Bank allows for a "gradual" transition from CQ to ACTs over four years, claiming that, "there is no recent study on the sensitivity of Plasmodium falciparum to usual antimalarial drugs such as chloroquine...in Benin."<sup>23</sup> Yet the Bank's same document acknowledges such a study and lists failure rates as high as 61.3 percent in 2004, with a 35.2 percent average<sup>24</sup> – far above the 10 percent failure rate that WHO guidelines set for treatment change. While this oversight might explain the Bank's willingness to take twice as long to roll ACTs out to Benin as it took the Global Fund to do so in Zambia,<sup>25</sup> it will surely be no consolation for the families whose children die of malaria in the mean time.

Both the Burkina Faso Health Sector Support and Multisectoral AIDS Project and the Niger Institutional Strengthening & Health Sector Support Program are not ambitious enough in their efforts against malaria. While both acknowledge that ACTs are necessary, neither set out a critical path for transitioning to them. The Bank concedes in the former that "current financing (even with the HSSMAP) is inadequate to fully finance ACTs,"<sup>26</sup> and in the latter sets out the goal for "the improvement of... first line treatment with Artemisin [sic] combination therapy (ACT),"<sup>27</sup> but in light of the high costs and lack of supply of ACTs proposes an "interim policy of artesunate-amodiaquine"<sup>28</sup> of indefinite duration. Where adequate global supply of antimalarials is concerned the Bank appears to be severely misinformed as these examples illustrate.

That the cost<sup>29</sup> and more importantly supply<sup>30</sup> of ACTs are increasingly surmountable obstacles attests both to the desperate need for the Bank to evolve its technical role in health supplies systems financing and its complete and regrettable inability to do so to date. Recently, Sanofi-Aventis, had to discard ten million tablets of artesunate – an antimalarial drug with a short shelf life— that were manufactured but not purchased before the 'sell by' date. Global orders for the drug had been overly optimistic. But this is not the only example. In response to estimates that demand would reach 50 million treatments, Novartis scaled up production of its ACT drug Coartem to 30 million treatments.<sup>31</sup> Real demand for Coartem, however, fell resulting in an oversupply. As the CEO of Novartis noted, "Demand remains half of what was projected."<sup>32</sup> Clearly, in both these instances, inaccurate forecasting has led to untold waste of money for the respective

firms. This does not make for good business or help the cause of those seeking for greater involvement of commercial pharmaceutical companies in poor country markets.<sup>33</sup>

### The Big Bank That Can't

These examples show that the Bank is either failing to provide ACT as recommended, or failing to support IRS as recommended, or both. Indeed, the only country where the Bank is supporting both ACT and IRS is Zambia—and this is only because Zambian Government decided to change policies in this regard, using their own funds and those from the Global Fund. Indeed to show how much of a laggard the Bank has been, the Global Fund was simply copying a successful policy instituted by the Zambian Government, which had, in turn, mainly copied what had been undertaken by the private mining sector in the north of the country. What worked in one of Africa's poorest countries, Zambia in 2001, could surely have worked elsewhere.

The reality is that the Bank is often a “fifth wheel,” duplicating or even competing with agencies having a greater core competence for disease control. The Shakow Report<sup>34</sup> concluded as much about the Bank's role on HIV/AIDS, but this is summed up just as neatly in a passage of one of the Bank's own current project documents: “Activities for control of other endemic diseases already receive adequate financing from other sources such as The Global Fund for malaria and tuberculosis, or GAVI for vaccination, as well as UNICEF, [and] WHO...However, if needed, these areas would also be eligible for funding from the [Bank] credit.”<sup>35</sup> It is an obvious waste of money and effort for the Bank to be chasing after other donors, who have arrived on the scene years ahead of them, with the offer of a little more money for the same projects as the other donors are already supporting.

Unfortunately, so far the Bank shows no signs of relenting, instead investing more to cover its exposed position and push through more malaria control programs. The Bank board has already been asked to approve seven this year, with another eight to be approved later in 2006.<sup>36</sup> One African health expert at the Bank has already been threatened with re-assignment for arguing against the mantra 'malaria before all other health projects' coming from DC.<sup>37</sup>

The WHO is planning the launch of a comprehensive ‘cookbook’ for malaria control policy later in 2006. The Bank has three choices: it can either send all of its malaria control project proposals to the WHO for technical review before obligating funds, or it can heed its own advice and transfer its entire malaria control budget to the Global Fund.<sup>38</sup> Last, and most appropriate to its core competence, it can hang on to the funds and actually do the health system development that it is uniquely placed to undertake.

### Conclusion

The US Government has started to demand to know how taxpayers' money is being spent and what good it does. The Federal Funding Transparency and Accountability Act was recently passed into law<sup>39</sup> to enable the creation of a publicly accessible database to track all federally funded projects. In principal, the bill applies to multilateral contributions as

well, but blundering, independent institutions like the Bank are unlikely to cooperate without a supreme effort on the part of Congress, the US Treasury or the Office of the President.

It may be that the days of global organizations dealing with seemingly global problems are numbered: malaria is the same bone-aching, fever-inducing disease everywhere, but treating and preventing it everywhere requires subtlety and sensitivity to culture, both of which large organizations rarely exhibit. Global health programs have been failing expensively for far too long. The poor of the world deserve better.

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<sup>1</sup> Roger Bate, "The World Bank and Disease Control : A Bad Combination," The World Bank, Health, Nutrition and Population in Sub-Saharan Africa, available at, <http://web.worldbank.org/WBSITE/EXTERNAL/COUNTRIES/AFRICAEXT/EXTAFRHEANUTPOP/0,,contentMDK:20905156~pagePK:34004173~piPK:34003707~theSitePK:717020,00.html>, accessed October 10, 2006.

<sup>2</sup> Fiona Godlee, "WHO in Retreat: Is It Losing Its Influence?" *British Medical Journal* 309, no. 6967 (1994): 1491–95.

<sup>3</sup> For instance, the Report by the WHO Director General on Malaria Control Strategy to the Thirty First World Health Assembly (1978) states "Therefore antimalaria activities must be guilt up as an integral part of the primary health care system, the front line of the health services." Although the report does stipulate that defined antimalaria responsibilities should be maintained, the end result of this move towards primary health care malaria control was that the vertical malaria control structures were largely dismantled. WHO, "Malaria Control Strategy Report by the Director General" 15 March 1978, A31/19, Geneva.

<sup>4</sup> World Bank (1992). Organizing and Managing Tropical Disease Control Programs: Case Studies.

<sup>5</sup> Snow RW, Guerra CA, Noor AM, Myint HY, Hay SI. The Global Distribution of Clinical Episodes of Plasmodium falciparum malaria. *Nature* 2005; 434: 214-17.

<sup>6</sup> World Health Organization, "Pregnant Women and Infants," Global Malaria Program, available at <http://www.who.int/malaria/pregnantwomenandinfants.html>, accessed October 10, 2006.

<sup>7</sup> USAID Memo "President's Malaria Initiative (PMI) Jump Start Activities" Washington DC , Undated.

<sup>8</sup> Attaran, A., Barnes, K., Curtis, C., d'Alessandro, U., Fanello, C., Galinski, M., Kokwaro, G., Looareesuwan, S., Makanga, M., Mutabingwa, T., Talisuna, A., Trape, J., Watkins, W., "Viewpoint: WHO, The Global Fund, and Medical Malpractice in Malaria Treatment", *The Lancet*, January 17, 2004, 363(9404):237

<sup>9</sup> Amir Attaran, Karen I. Barnes, Roger Bate, Fred Binka, Umberto d'Alessandro, Caterina I. Fanello, Laurie Garrett, Theonest K. Mutabingwa, Donald Roberts, Carol Hopkins, Sibley Ambrose Talisuna, Jean-Pierre Van geertruyden, William M. Watkins., "The World Bank: False Financial and Statistical Accounts and Medical Malpractice in Malaria Treatment," *The Lancet* (Viewpoint), published online at [www.thelancet.com](http://www.thelancet.com) on April 25, 2006. Copy on file with author.

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- <sup>10</sup> Personal communications with World Bank economists, February 20, 2006 and May 15, 2006.
- <sup>11</sup> Personal communications with World Bank economists, February 20, 2006 and May 15 2006.
- <sup>12</sup> World Bank (2004). Accelerating Efforts to Roll Back Malaria: The World Bank's Global Strategy, Concept Note. Internal document on file with author.
- <sup>13</sup> Kelley Lee & Ken Buse (2006) 'Assuming the mantle: the balancing act facing the new WHO Director-General' *Journal of Royal Society of Medicine*, vol 99, Oct 2006 p.494-496.
- <sup>14</sup> Attaran, A., Barnes, K., Bate, R., Binka, F., d'Alessandro, U., Fanello, C., Garrett, L., Mutabingwa, T., Roberts, D., Sibley, C., "The World Bank: False Financial and Statistical Accounts and Medical Malpractice in Malaria Treatment", *The Lancet*, July 15, 2006, 368(9531): 247-252.
- <sup>15</sup> Celia W. Dugger, "World Bank Failed in Fight Against Malaria, Health Experts Say," *The New York Times*, April, 25, 2006, available at <http://www.nytimes.com/2006/04/25/world/africa/25malaria.html?ex=1303617600&en=e213e9734dd24f1a&ei=5090&partner=rssuserland&emc=rss>, accessed October 10, 2006. Also see, Sarbib JL, Nankani G, Patel P "The Booster Program for Malaria Control: Putting Knowledge and Money to Work" *The Lancet*, July 15, 2006, Vol. 368: 9531, 253-257.
- <sup>16</sup> World Bank, 2000. "Project Appraisal Document on a Proposed Credit in the Amount of SDR 31.4 Million (US\$40.00 Million Equivalent) to the Government of Eritrea for HIV/AIDS, Malaria, STDS & TB (HAMSET) Control Project", Report No: 20608-ER.
- <sup>17</sup> World Bank, 2005. "Project Appraisal Document on a Proposed Grant in the Amount of SDR 15.9 Million (US\$ 24.0 Million Equivalent) to the State of Eritrea for a HIV/AIDS/STI, TB, Malaria and Reproductive Health Project (HAMSET II)", Report No: 31853-ER. Available at: [http://www-wds.worldbank.org/external/default/WDSContentServer/WDSP/IB/2005/06/14/000160016\\_20050614100210/Rendered/PDF/31853a.pdf](http://www-wds.worldbank.org/external/default/WDSContentServer/WDSP/IB/2005/06/14/000160016_20050614100210/Rendered/PDF/31853a.pdf), accessed October 16, 2006.
- <sup>18</sup> World Bank, 2006. "Project Appraisal Document on a Proposed Loan in the Amount of US\$110 Million to the Republic of the Philippines for a National Sector Support for Health Reform Project." Report No: 35405-PH. Available at [http://www-wds.worldbank.org/external/default/main?pagePK=64193027&piPK=64187937&theSitePK=523679&menuPK=64187510&searchMenuPK=64187283&siteName=WDS&entityID=000160016\\_20060613112941](http://www-wds.worldbank.org/external/default/main?pagePK=64193027&piPK=64187937&theSitePK=523679&menuPK=64187510&searchMenuPK=64187283&siteName=WDS&entityID=000160016_20060613112941), accessed October 16, 2006.
- <sup>19</sup> Nyarango PM, Gebremeskel T, Mebrahtu G, Mufunda J, Abdulummini U, Ogbamariam A, Kosia A, Gebremichael A, Gunawardena D, Ghebrat Y, Okbaldet Y. A steep decline of malaria morbidity and mortality trends in Eritrea between 2000 and 2004: the effect of combination of control methods. *Malaria Journal* 2006;5:33.
- <sup>20</sup> World Bank, 2005. "Project Appraisal Document on a Proposed Grant in the Amount of SDR 15.9 Million (US\$ 24.0 Million Equivalent) to the State of Eritrea for a HIV/AIDS/STI, TB, Malaria and Reproductive Health Project (HAMSET II)", Report No: 31853-ER, p.69. Available at: [http://www-wds.worldbank.org/external/default/WDSContentServer/WDSP/IB/2005/06/14/000160016\\_20050614100210/Rendered/PDF/31853a.pdf](http://www-wds.worldbank.org/external/default/WDSContentServer/WDSP/IB/2005/06/14/000160016_20050614100210/Rendered/PDF/31853a.pdf), accessed October 16, 2006.
- <sup>21</sup> Ibid, page 67.
- <sup>22</sup> World Bank, 2006. "Project Appraisal Document on a Proposed Loan in the Amount of US\$110 Million to the Republic of the Philippines for a National Sector Support for Health Reform Project." Report No: 35405-PH, p.71. Available at <http://www-wds.worldbank.org/external/default/main?pagePK=64193027&piPK=64187937&theSitePK=523679&men>

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uPK=64187510&searchMenuPK=64187283&siteName=WDS&entityID=000160016\_20060613112941, accessed October 16, 2006.

<sup>23</sup> World Bank, 2006, "Project Appraisal Document on a Proposed Grant in the Amount of SDR 21.60 Million (US\$31 Million Equivalent) to the Republic of Benin for a Malaria Control Support Project, Report No: 35555-BJ, p.69, available at: [http://www-wds.worldbank.org/external/default/WDSContentServer/WDSP/IB/2006/05/11/000090341\\_20060511094932/Rendered/PDF/35555.pdf](http://www-wds.worldbank.org/external/default/WDSContentServer/WDSP/IB/2006/05/11/000090341_20060511094932/Rendered/PDF/35555.pdf), accessed October 16, 2006.

<sup>24</sup> Ibid, p.20. It also lends no confidence that the names of common malaria medicines are often misspelled in that document (e.g. Atémethé, Coertem, Sulphadozine Pyrymethamine) suggesting the Bank really doesn't have anyone working for it who knows the first thing about malaria.

<sup>25</sup> World Bank, "Benin: Malaria Booster Project (Project Information Document-Appraisal Stage) May 30, 2006, available at [http://www-wds.worldbank.org/servlet/WDSContentServer/WDSP/IB/2006/03/20/000104615\\_20060320153721/Rendered/PDF/Project0Inform1010Appraisal0Stage01.pdf#search=%22100%20percent%20utilization%20of%20ACT%20%E2%80%9Cwith%20the%20transition%20occurring%20gradually%2C%E2%80%9D%20and%20%E2%80%9Cover%20the%20next%204%20years%22](http://www-wds.worldbank.org/servlet/WDSContentServer/WDSP/IB/2006/03/20/000104615_20060320153721/Rendered/PDF/Project0Inform1010Appraisal0Stage01.pdf#search=%22100%20percent%20utilization%20of%20ACT%20%E2%80%9Cwith%20the%20transition%20occurring%20gradually%2C%E2%80%9D%20and%20%E2%80%9Cover%20the%20next%204%20years%22), accessed October 10, 2006.

<sup>26</sup> World Bank, 2006. "Project Appraisal Document on a Proposed Credit in the Amount of SDR 33.0 Million (US\$47.7 Million Equivalent) to Burkina Faso for a Health Sector Support and Multisectoral AIDS Project", Report No: 35738-BF, p.6, available at: [http://www-wds.worldbank.org/external/default/WDSContentServer/WDSP/IB/2006/04/10/000160016\\_20060410115147/Rendered/PDF/35738.pdf](http://www-wds.worldbank.org/external/default/WDSContentServer/WDSP/IB/2006/04/10/000160016_20060410115147/Rendered/PDF/35738.pdf), accessed October 16, 2006.

<sup>27</sup> World Bank, 2005. "Project Appraisal Document on a Proposed Credit in the Amount of SDR 24.20 Million (US\$ 35.0 Million Equivalent) to the Republic of Niger for Institutional Strengthening and Health Sector Support Project, Report No: 31111-NE, p.51, available at: [http://www-wds.worldbank.org/external/default/WDSContentServer/WDSP/IB/2005/12/16/000160016\\_20051216111526/Rendered/PDF/31111.pdf](http://www-wds.worldbank.org/external/default/WDSContentServer/WDSP/IB/2005/12/16/000160016_20051216111526/Rendered/PDF/31111.pdf), accessed October 16, 2006. Note again the misspelling of a common drug ("artemisin") suggesting that the Bank staff does not have any technical immersion in malaria.

<sup>28</sup> Ibid, p.107

<sup>29</sup> "Novartis Cuts Price of Malaria Drug by a Third," *Reuters*, September 28, 2006, available at <http://today.reuters.com/news/articlebusiness.aspx?type=health&storyID=nL29739199&from=business>, accessed October 10, 2006.

<sup>30</sup> "Deadly Disconnect" by Claire P. Dunavan, *Courant.com*, September 28, 2006, available at [http://www.courant.com/news/opinion/op\\_ed/hc-dunavan0928.artsep28,0,398130.story?coll=hc-headlines-oped](http://www.courant.com/news/opinion/op_ed/hc-dunavan0928.artsep28,0,398130.story?coll=hc-headlines-oped), accessed October 10, 2006.

<sup>31</sup> "Cloudy with a Chance of Prevention: Demand Forecasts and Assessments" by Catherine Zandonella, IAVI Report, July 2006, available at <http://www.iavireport.org/Issues/Issue10-3/demand.asp>, accessed October 10, 2006.

<sup>32</sup> "Costs of Forecasting=10 million Antimalarials" by Ruth Levine, Center for Global Development :Global Health Policy, July 25, 2006, available at [http://blogs.cgdev.org/globalhealth/2006/07/costs\\_of\\_poor\\_f.php](http://blogs.cgdev.org/globalhealth/2006/07/costs_of_poor_f.php), accessed October 11, 2006.

<sup>33</sup> Ibid

<sup>34</sup> "Global Fund- World Bank Programs: A Comparative Study" by Alexander Shakow, Report jointly commissioned by the Global Fund to Fight AIDS, Tuberculosis and Malaria (GFATM) and the World Bank, available at <http://siteresources.worldbank.org/INTHIVAIDS/Resources/375798-1103037153392/GFWBReportFinalVersion.pdf>, accessed October 10, 2006.

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<sup>35</sup> Mauritania Health and Nutrition Support Project, Project Assessment Document, page 14.

<sup>36</sup> Personal communications with World Bank economists, February 20, 2006 and May 15, 2006.

<sup>37</sup> Ibid

<sup>38</sup> World Bank (2004). Accelerating Efforts to Roll Back Malaria: The World Bank's Global Strategy, Concept Note. Internal document on file with author.

<sup>39</sup> "A Bill to Require Full Disclosure of all Entities and Organizations Receiving Federal Funds-S.2590," Sponsored by Senator Tom Coburn, April 6, 2006, Library of Congress, available at, <http://www.congress.gov/cgi-bin/bdquery/z?d109:S.2590>, accessed October 10, 2006.