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Economy Versus Ecology: A Human Rights Perspective on the Proposed Copper Mine in Teghut

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This article explores the concerns raised regarding the proposed copper and molybdenum mine in Teghut (Armenia) from a human rights perspective. It aims to assert that a human-rights-based morality is the most universally-accepted global morality, and thus the one which may be most justifiably used by outsiders to judge the actions of other cultures. It examines which of the complaints against the proposed mine can be upheld due to their status as human rights violations. More importantly, however, it aims to explain why supporters of a human-rights-based morality must reject some of the more obvious and seemingly valid criticisms of the mine. In doing so, the paper aims to highlight a potentially catastrophic flaw in the logic of the human rights doctrine which may well prevent its supporters from adequately combatting climate change.

Keywords

Ecology, human rights protection, morality, climate change, Teghut

Introduction

In recent years, Armenia has witnessed the emergence of a large, passionate, and organised environmental movement, protesting against all manner of state-sanctioned constructions - from hydro-power stations on waterfalls to shops in parks – with varying levels of success. The phenomenon raises many issues surrounding democracy, freedom of speech, and corruption. Most of all, it highlights a clash of interests between today's economic needs and tomorrow's ecological requirements; a clash which is becoming more and more common throughout the developing world. As Humphreys notes,

More than any previous issue, climate change places the question of human rights fulfilment firmly within the context of development policy. This is because tackling climate

change will require revisiting development models and making far-reaching decisions about access to the use of resources, questions which in turn have direct human rights consequences.¹

The proposed copper and molybdenum mine in Teghut represents an intriguing microcosm of just such an issue. While the employment opportunities the mine will create within a desperately impoverished rural community will prove invaluable to local residents, environmentalists fear that the ecological damage caused to the site will be devastating for both the environment and its inhabitants (human and otherwise) for decades to come. It is a scenario which raises complex ethical issues surrounding the moral status of non-human creatures and the moral weight held by future persons. Such issues will be difficult to pass judgement upon, particularly for those who remain unaffected by the poverty that apparently necessitates the aforementioned ecological damage. If we are to judge the actions of others at all, we must judge them against some sort of pre-defined standards. Adopting the standards of human rights as our moral yardstick enables such judgements to be made on the basis of standards that the Armenian government is already bound by. Moreover, in addition to highlighting the most important ethical issues with the proposed mine, a human-right-based approach to the problem will also help to demonstrate the limitations of the doctrine that many hold so dear.

Disclaimer

Before going any further, it should be noted that, although great effort has been taken to verify all sources used within this paper, some of the standards of evidence are not of the highest level. While every attempt has been made to refer to the most up-to-date and respected academic and scientific sources, this has simply not always been possible with regard to some of the Armenia-specific information which follows. As such, the information available from texts has been supplemented with a series of interviews with experts in the Armenian environmental field, including; Jeff

¹ **Humphreys S.**, Introduction: Human Rights and Climate Change, in *Humphreys S., Human Rights and Climate Change*, Cambridge University Press, Cambridge, 2010, p. 11.

Masarjian and Armine Tokhmakhyan of Armenia Tree Project (ATP), and Kirk Wallace of Armenian Environmental Network (AEN).

This problem of limited academic resources is itself demonstrative of an initial discrepancy between the developed and the developing when it comes to climate change. As *The Stern Report* notes; “All countries will be affected by climate change, but the poorest countries will suffer earliest and most.”² Despite this fact (or, indeed, as a partial explanation of it), information on how climate change will affect (and, indeed, *is* affecting) human rights is much less available in relation to developing countries, which often lack the necessary resources to carry out such research³. This leaves their citizens vulnerable to the serious human rights violations which will result from climate change since, even if developing countries did have the resources necessary to mitigate against such problems, they have no way of identifying what such problems will be. It is not surprising that this issue, which is pervasive throughout the developing world, affects Armenia. One example of this is demonstrated in a 2009 report published by the government’s Ministry of Nature Protection, which highlights the fact that “(t)here is no Armenian-specific research available that forecasts the scale of the likely increase in incidence of water-borne diseases with climate change.”⁴

Why a Human Rights Perspective?

One of the major problems with judging the practices of any culture as an outsider is that ‘morality’ is not a universal concept. Cultural practices which are the norm in one country may be considered abhorrent in the next. For example, while many in the West would consider the killing of a cow to eat at a community barbecue unremarkable, such a practice would be considered reprehensible by many in India.

This problem of locating a universal morality is further amplified by the vast disparities in wealth which are witnessed throughout the globe. There doubtlessly exist certain scenarios which people of all cultures find

² Osborne H., *Stern Report: The Key Points*, (30/10/2006) Available at: <http://www.guardian.co.uk/politics/2006/oct/30/economy.uk> (March 2012)

³ Humphreys S., ...,p. 17.

⁴ Ministry of Nature Protection of the Republic of Armenia, *Vulnerability of Water Resources in the Republic of Armenia Under Climate Change*, Yerevan, 2009, p. 12.

unacceptable, but where approaches to combatting such issues vary greatly. No child deserves to perish from malaria, yet while the majority of countries have devoted great resources to eradicating the disease within their territory, many African children do not receive even a minimum level of preventative care. This difference in approach does not speak of a difference of opinion over the value of human life, but of a difference in resources. The fact is that tough decisions will need to be made more often in developing countries – leading to policies that many in the West might find unacceptable.

As Griffin asserts, “(t)he belief is widespread that human rights mark what is most important in morality”.⁵ The doctrine represents a value system that crosses cultures, religions, and national borders. It is the closest thing to a universal morality that humanity has ever had. If we cannot judge the behaviours of others by the standards of human rights, it is difficult to see how we can judge them at all.

Perhaps more importantly, Armenia has ratified many international human rights treaties, including the two major 1966 treaties – the International Covenant on Civil and Political Rights (ICCPR) and the International Covenant on Economic, Social, and Cultural Rights (ICESCR). As such, its government has accepted that it holds certain duties in relation to human rights; duties which have been enshrined in law and which the international community have a responsibility to ensure are met. As such, if the environmentalists who oppose the situation in Teghut could demonstrate that the government’s activities in the area amount to a violation of human rights, their demands for the cessation of such activities would carry great moral and legal weight.

The Logic and Structure of Human Rights

It is important to bear in mind a general idea of the way in which human rights are structured before considering whether they have been violated.

The first thing to note is that the concept of human rights is a fundamentally non-legal one.⁶ While there may be good reasons for seeking to encode them in law, such a condition is neither necessary nor sufficient to demonstrate their existence. This is not to say that the law is unimportant,

⁵ **Griffin J.**, *On Human Rights*, Oxford University Press, Oxford, 2008, p. 92.

⁶ **Jones P.**, *Rights*. Macmillan Press Ltd, London, 1994, p. 82.

particularly in the case of Teghut. Firstly, as I have already mentioned, the fact that the Armenian government has signed up to many human rights treaties adds weight to the legitimacy of judging its actions in accordance with the basic moral standards of human rights which underline such treaties. Secondly, there exists a widely held opinion among environmentalists that the proposed mine is in violation of the law.⁷ Regardless of the content of such laws, there is a human right that the law should be consistently and fairly followed by everybody, and upheld by the government. It is for this reason that I highlight the significance of the legal issues surrounding the mine. This paper, however, focusses upon the moral logic of the human rights doctrine. As such, the specific issue of the mine's legality will not be discussed.

The next thing to note about human rights is that they are universal – they are acquired simply through one's status as a human. Indeed, they are doubly universal, that is to say, they are held by everybody, against everybody else.⁸ Hence, if your action in building a mine would lead to the violation of my right to health, you would have failed in your duty not to cause me harm. In such a case, the logic of human rights would require that my government, who act as the ultimate protector of my rights, prohibit your action and punish any violation which had already taken place.

Most importantly, human rights are mandatory.⁹ The only reason for not meeting one's correlative duties is if, in doing so, one would place one's own human rights in danger. Human rights are designed to function as a 'trump' over unrestricted utility.¹⁰ In other words, the very point of human rights is to assert that there are certain actions which may not be taken (i.e. those actions which would violate human rights) regardless of the perceived negative consequences of not taking them.

As a result, human rights supporters are effectively forced to adopt a human-rights-based morality. This is not to say that they cannot hold that

⁷ In the opinion of Socio-Ecological Association President, Srбуhi Harutyunyan, the operation in Teghut is currently in violation of seventy-seven different articles of law, *Copper Mine Menaces Armenia's Teghut Fores*), Available at: <http://www.ens-newsire.com/ens/jul2007/2007-07-11-01.asp> (March 2012)

⁸ **Griffin J.**, ..., p. 101.

⁹ **Nickel J.**, *Making Sense of Human Rights*, Blackwell Publishing, Oxford, 2007, p. 9.

¹⁰ **Dworkin R.**, *Rights as Trumps*, *Waldron J.*, *Theories of Rights*, Oxford University Press, Oxford, 1984, p. 153.

non-human-rights-based values can be morally desirable, but only that such values must be morally incorrect if meeting them comes at the cost of even a minor infringement of human rights. Thus, if I purchase new toys for an orphanage (a morally good action which goes beyond the duties the human rights doctrine assigns to me), but I do so using £100 which I have stolen from a multi-billionaire (thus violating her human right to property) then my action must be judged to be morally bad by the human rights supporter, even though the children are more in need of toys than the billionaire is of £100. The only situation in which human rights may be justifiably restrained is when their exercise would violate the human rights of others. When such ‘clashes of rights’ occur, the legitimacy of Gewirth’s principle that the right which is most necessary for action should prevail is widely accepted.¹¹

Climate Change

A further reason for adopting a human rights perspective is the fact that climate change represents the largest threat to human rights in humanity’s history. Almost every human right will be negatively affected by climate change. Flooding will damage homes (the right to shelter) and bring disease (the right to health). Droughts will remove people’s sources of income (the right to work) and their means of feeding themselves (the right to food).

In Armenia, many of these effects will be felt strongly and quickly – indeed, some are already being felt. In 2000, the country lost more than 10% of its gross agricultural product to drought.¹² In fact, Armenia’s water supply seems particularly vulnerable to climate change, with experts predicting that river flow will reduce by 6.7% by 2030 if current temperature patterns are followed.¹³ This fact, combined with other internal factors, may well render Armenia uninhabitable within the current generation’s lifespan.

There is now widespread agreement among the scientific community that climate change is the result of human actions¹⁴, with industrial emissions

¹¹ **Gewirth A.**, *The Community of Rights*, University of Chicago Press, Chicago, 1996, p. 45.

¹² Ministry ..., p. 6.

¹³ *Agriculture Productivity Reducing Due to Climate Changes*, (16/03/2012), Available at: <http://www.ecolur.org/en/news/climate-change/agriculture-productivity-reducing-due-to-climate-changes/3666/> (March 2012)

¹⁴ **Page E.A.**, *Climate Change, Justice and Future Generations*, Edward Elgar, Cheltenham, 2006, p. 6.

of Greenhouse Gases (GHGs) being the main cause. As a result of all this, it seems eminently reasonable to assert that, in taking actions which increase levels of pollution, one could be seen to violate the human rights of others.

Deforestation

However, it is not simply our emissions which are responsible for climate change. Globally speaking, deforestation is more damaging to the climate than the emissions of the entire transport sector.¹⁵ This is not as surprising as it might seem. Trees are humanity's main weapon against climate change. They sequester much of the CO₂ produced through human activities before expelling this as oxygen as part of the process of photosynthesis. As such, when there are fewer trees, more CO₂ reaches the earth's atmosphere, thus causing it to thicken, creating a 'greenhouse effect'.

The phenomenon of deforestation is closely tied to economics. Odihi asserts that deforestation is often "a result, a symptom, and a cause of poverty".¹⁶ The situation in Armenia appears to evidence such a claim. While the phenomena began in the Soviet era, it has now escalated to an unprecedented level.¹⁷ After the collapse of the Soviet Union, trees were illegally felled on a vast scale in order to be used for fuel in the absence of other sources of energy.¹⁸ However, despite the reinstatement of national supplies of gas and electricity, deforestation has not abated. The World Bank estimates that 600-700 thousand cubic metres of wood are illegally logged in Armenia each year.¹⁹ This figure is additional to the many hectares of forest which are felled with the government's permission. According to a 2007 report by the Economy and Values Research Center, it is estimated that

¹⁵ Osborne H., ...

¹⁶ Odihi J., Deforestation in Afforestation Priority Zone in Sudano-Sahelian Nigeria, *Applied Geography*, 2003, 23, pp. 227-259.

¹⁷ The State of Armenia's Environment, Policy Forum Armenia Press, Yerevan, 2010, p. 15.

¹⁸ Grigoryan M., and Hayrapetyan A., *Armenia: Where Deforestation is a Hidden Killer*, 24/10/2011, Available at: <http://www.eurasianet.org/node/64365> (March 2012)

¹⁹ Copper, ...

around 46% of this illegal logging is performed by subsistence families who use the wood for fuel.²⁰

The problem is increasingly serious. Most experts estimate that forests currently cover 6-8% of Armenia's territory²¹, a reduction from 25% over the last 200 years²². According to World Bank experts, 80% of Armenia is currently undergoing a process of desertification,²³ and if deforestation continues at the current rate, that figure will only rise. Needless to say, such a process will have a devastating impact on the human rights of Armenians.

Teghut

So what has all this got to do with a copper mine? The answer depends on to whom one addresses the question.

The Armenian government has granted Armenian Copper Programme (ACP) (which is a subsidiary of Vallex F.M.) a twenty-five-year licence to build a copper and molybdenum mine in the impoverished area of Teghut.²⁴ The human rights benefits of such a project are immediately clear.

²⁰ The Economics of Armenia's Forest Industry, Economy and Values Research Center, Yerevan, 2007

²¹ **Masarjian J.**, *Original Interview with Jeff Masarjian*, (interview by Barnard, B., (via Skype), Watertown, 27/02/2012).

It should be noted that, according to official government figures, forestation in Armenia remains at 11.2%. However, as Tokhmakhyan highlights, it is quite possible that this discrepancy results from a difference of opinion over what constitutes a forest;

"There are different classifications. The UN, ATP, and other agencies estimated that the forest cover in Armenia is less than 8%. But the recent studies...arrived at the conclusion that now Armenia has more than 11% of forest cover...and it's all based on satellite pictures. So now some experts say, ok we may have this level of forest cover, but we do not know if whether, when the satellites see green, that is a forest for a satellite." Tokhmakhyan, A., *Original Interview with Armine Tokhmakhyan*, (interview by Barnard, B., Yerevan, 29/03/2012)

²² Report on Millennium Development Goals, (Armenia, 2002). This represents fall in forest cover of around 66% over the past two centuries. By way of contrast, global rainforest coverage has only fallen by 50% over the same period.

Owen L., and Pickering K., *An Introduction to Global Environmental Issues*, Routledge, London, 1994, p. 352.

²³ Drought: Management and Mitigation Assessment for Central Asia and the Caucasus, World Bank Report No: 31998-ECA, 2005, p. 25.

²⁴ **Matosian M.**, Save Teghut Redefines Environmental Activism, 21/02/2012, Available at: <http://www.armenianweekly.com/2012/02/21/save-teghut-redefines-environmental-activism-in-armenia/> (March 2012)

Firstly, according to the former Governor of the Lori Marz²⁵, Henrik Kochinyan, the mine will create 1500 new jobs for local residents.²⁶ Given the relatively small local population, and the vast level of unemployment within it (which can be as high as 50%²⁷), such an influx of employment opportunities will make a real difference to people's lives. In addition to the obvious fact that such jobs fulfil the right to work of these individuals, Armenia's distinctly underdeveloped social security system means that the positions may well also end up facilitating many of the other basic human rights of the workers and their families, such as rights to shelter and food.

Moreover, it is not only the human rights of the newly-employed that will be improved by the new mine. It is estimated that the Armenian government will receive approximately \$600-650 million in tax revenue and fees over the life of the mine.²⁸ Such an additional level of income could be used to fund countless operations, school places, or facilitate any number of other human rights.

At this point, it is necessary to consider one of the more immediate criticisms of the project. Critics note that the money raised in taxation will only represent a tiny fraction of the value of the ore being mined,²⁹ and that the money raised represents a relatively insignificant percentage of the government's total revenue.

It seems that, for the human rights supporter, such criticism can be quickly dispersed with. Even if the level of revenue raised by the mine is relatively small, it still represents additional revenue which can be put towards meeting human rights.³⁰ Indeed, any complaints over the amount of

²⁵ The regional administrative areas of Armenia are known as 'Marzes'. Lori Marz is the area in which Teghut is located.

²⁶ **Danielyan N.**, The Teghut Forest is Doomed, Thanks to the Minister for Nature Protection, 24/07/2006, Available at: <http://hetq.am/eng/news/10691/the-teghut-forest-is--doomed-thanks-to-the-minister-of-nature-protection.html> (February 2012)

²⁷ Copper

²⁸ This figure represents around 1% of the government's total revenue collection per annum. The Fate..., p. 26-27.

²⁹ **Masarjian J.**, Save Teghut, Armenia Tree Project Conference, Pasadena, 2012, Available at: <http://www.youtube.com/watch?v=mPnmJFDhkhw&feature=related> (April 2012)

³⁰ Of course, there is no guarantee that such funds *will* be put towards human rights, but that is a separate issue. In order to demonstrate the potential human rights benefits of the mine, it is simply necessary to assert that it will provide additional

revenue to be gained only seem to evidence the argument that the mining company should be taxed to a greater level – not that it should be stopped altogether.

With this immediate criticism overcome, there appear to be four main areas of concern for environmentalists surrounding the mine's existence which pose far stronger moral questions:

1. The damage that will be done to historical monuments
2. The damage that will be done to endangered species of plants and animals
3. The damage that will be done to the human rights of future generations
4. The damage that will be done to the human rights of the current generation.

Over the course of this paper, it will be demonstrated that the human rights supporter must assert that it would be illegitimate and, indeed, immoral to prohibit the mine on the grounds of the first three complaints, but that the fourth complaint (*if* it can be conclusively demonstrated) would render the government of Armenia morally (and, in all likelihood, legally) obliged to revoke ACP's mining licence. In the process of providing a rational, logical analysis of the problems with the mine, some of the ethical problems with a human-rights-based morality will also be highlighted.

The damage to historical monuments

Excavation of the area where the proposed mine will be built has revealed the existence of several ancient monuments of historical significance (ironically, the excavations were funded by Vallex)³¹. There is great concern that these monuments will be destroyed or rendered inaccessible by the proposed mine – particularly those which will be buried beneath the mine's tailings foundry. Vallex has already proposed relocating

income which the government would not otherwise have received which *could* be diverted to human rights causes.

³¹ **Abrahamyan G.**, Teghut Concerns: Archeologist says ancient sites another reason against mining in endangered forest, 27/01/2012, Available at: http://armenianow.com/social/environment/35031/save_teghut_protest_copper_mine (February 2012)

one of the monuments to a different site, but archaeologists feel that this would cause it to lose its significance.³²

This argument is perhaps the least challenging of the four in terms of human rights thinking. There is no human right to the enjoyment or preservation of historical monuments. The closest thing is article 15(1)(a) of the ICESCR, which affords the right to take part in cultural life. However, since these monuments were, until very recently, unknown, they clearly do not play a significant role in the cultural life of any current persons. As such, it is difficult to foresee any way in which the damage to these historical monuments could constitute a violation of human rights.

Of course, this is not to prevent the human rights supporter from thinking that preserving historically and culturally significant monuments to be a commendable activity. History is an important part of the identity of any nation, and nowhere is this truer than in Armenia. However, the protection of historically significant artefacts cannot be considered the correct course of action if one has to sacrifice the human rights of any current individual in order to do so. As such, it is not permissible for the human rights supporter to sanction the preservation of the monuments in Teghut if doing so comes at the cost of sacrificing the existence of the mine and its accompanying human rights benefits.

The Damage to Endangered Species

According to ACP, the areas affected by mining will amount to 670 hectares, of which 510 hectares are currently covered by forest.³³ This area is home to over fifty different species of plants, mammals, and fish which are currently listed as threatened or endangered.³⁴ Their habitat, and therefore their continued existence, will undoubtedly be placed in further jeopardy by the mine.

³² **Abrahamyan G.**,

³³ The State..., p. 23; It should be noted that this figure seems to vary depending on whether one asks ACP, the government, or environmentalists, an issue which will be discussed further later in the paper.

³⁴ Big Family, Save Teghut: The Problem, (12/12/2007), Available at: http://www.bigfamily.am/eco/index.php?option=com_content&view=article&id=13&Itemid=17 (February 2012)

This is not an issue which is specific to Armenia. At a global level, species loss is estimated to be occurring at 1000 times the natural rate.³⁵ Armenia represents a microcosm of this global problem. The South Caucasus is one of the planet's twenty-five most endangered bio-diversity hotspots.³⁶ Given the extremity of the microclimates that exist within Armenia (seven of the nine possible climate zones in the world occur within its borders³⁷), allowing mining in Teghut could make a significant contribution to eradicating many entire species.

The moral implications seem clear in this case. Eco-centrics like Peter Singer would have no trouble in explaining why wiping dozens of species from existence for the sake of a few hundred million dollars and relatively few employment opportunities should be considered immoral. Indeed, many less environmentally-focussed individuals would doubtlessly share such an opinion. For the human rights supporter though, the outlook is very different. As Wallace puts it; "...there's this inherent conflict right now between the environmental movement and the right of these people to work....do Armenian's have a right to protect endangered species in their country? There's no *human* right to that."³⁸ Nor, of course, are plants and non-human animals capable of possessing human rights. As such, because we again face a situation where one choice (mining) will lead to human rights fulfilment, and the other (not mining) will not, the human rights supporter is once more forced to deny the significance of a major area of opposition to the Teghut mine.

The Damage to the Human Rights of Future Generations

A key area of concern among those opposed to the mine in Teghut is the damage it will cause to the human rights of individuals who do not yet exist. This is a particularly complicated area in terms of human rights, and there are many sub-issues within it. As has already been established,

³⁵ **Spanner Films**, *The Age of Stupid*, (film), 2009.

³⁶ **Sohigian J.**, *Redefining Economic Systems: Could a Forest be Worth More Than a Goldmine?* TEDx Conference, Yerevan, 2011, Available at: http://www.youtube.com/watch?v=ehpa1BTULVE&feature=player_embedded (March 2012)

³⁷ **Masarjian J.**,

³⁸ **Wallace K.**, Original Interview with Kirk Wallace, (Interviewed by Barnard, B., Yerevan, 27/02/2012)

deforestation causes climate change, and climate change will cause human rights violations among future generations across the world. However, is far from clear as to what conclusion one should draw from facts.

Firstly, despite the fact that climate change is deeply worsened by deforestation, it is less than clear that the widespread felling of trees can be legitimately considered to be a cause of climate change. Forests are necessary to *mitigate against* increasing global temperatures which are *caused* by pollution. If it were not for the large amounts of GHGs being pumped into the atmosphere, we would not need nearly so many trees as there would be far less carbon to be sequestered.

Of course, even if one accepts this fact, it might still be claimed that the Teghut mine will go some way to *causing* climate change due to the emissions which will arise from it. Such emissions, however, will play only the most miniscule role in the overall level of climate change that it seems difficult to see this as a legitimate reason for its prohibition. Indeed, given the fact that the total emissions of Armenia (whose citizens will be drastically affected by climate change) since 1850 were vastly less than one per cent of those produced by China in 2009 alone³⁹, it seems arguable that, regardless of Armenia's actions, the human rights violations caused by climate change are primarily the result of the emissions of other states. As such, it seems that the duty to adapt to and mitigate against climate change in Armenia falls upon parties other than Vallex or the Armenian government.⁴⁰

Such an argument, however, only necessitates that it is not reasonable to hold Armenia accountable for climate change related violation of the human rights of future persons who will one day exist outside of Armenia. In other words, the problem of global climate change is so vast, and so largely the result of the actions of other nations, that Armenia's level of responsibility is insignificant. At a domestic level, however, things are

³⁹ Armenia produced 3669.1 thousand tonnes of Co2 between 1850 and 2000 (http://www.nationmaster.com/red/pie/env_co2_emi-environment-co2-emissions#definition), while China produced 7,031,916 thousand tonnes in 2009 alone

(<http://data.worldbank.org/indicator/EN.ATM.CO2E.KT/countries/1W?display=default>).

⁴⁰ Jeff Masarjian explains that, in his experience, developed countries are beginning to acknowledge this fact. APT have recently received large grants from the German Development Bank and the Norwegian government to carry out reforestation work in Armenia. **Masarjian J.,**

very different. If Armenia cuts down all of the trees within its territory, the climate within that territory will change in a manner which is negative in terms of human rights realisation. This is true regardless of GHG emissions. Indeed, even if GHG emissions were necessary for such human rights violations to occur, this would not amount to an adequate defence on the government's part, since they could and should have known the consequences of their actions. It seems clear then, that while the government cannot easily or reasonably be held accountable for the human rights violations which future persons suffer as a result of the *general* phenomena of anthropogenic climate change, it is more than reasonable to hold them accountable for the *specific* violations which occur solely as a result of their actions.

The problem with such an assertion, however, is that, from a human rights perspective, it seems doubtful that future persons should be capable of holding human rights at all. It seems implicit in the nature of human rights that they can only be held by normative agents.⁴¹ Although future persons will one day meet this criteria, they do not yet do so. As such, they are only *potentially* human and so are only *potential* right-holders. Human rights are about protecting human interests and, as Feinberg puts it, "...there are no actual interests, presently existent, that future generations, presently non-existent, have now."⁴² In short, according to the logic of human rights, past and future persons lack the contemporaneity which is necessary if they are to hold duties in regard to one another. Therefore, while my right to work in a mine may severely damage the human rights of the future generations who are forced to grow up in the desert which my actions have helped to create, this does not constitute a clash of rights. As such, the human rights supporter is forced by the logic of their doctrine to place the *actual* rights of a few hundred workers above the *potential* rights of the millions who do not yet exist.

The Damage to the Human Rights of the current generation

If it could be demonstrated that the proposed mine in Teghut would endanger the human rights of current Armenians, this would represent the

⁴¹ Griffin J., ..., p. 92

⁴² Feinberg J., The Rights of Animals and Unborn Generations, in *Feinberg J., Rights, Justice, and the Bounds of Liberty: Essays in Social Philosophy*, Princeton University Press, Princeton, 1980, p. 181.

most obvious and legitimate objection to its going ahead from a human rights perspective. If the human rights of current persons will be violated, then the human rights supporter is no longer condemned to supporting the mine due to the human rights benefits it will confer through job opportunities and taxation. Of course, it would still have to be demonstrated that the human rights benefits of stopping the mine would, in accordance with Gewirth's maxim, be more necessary for action than the benefits of mining, but, given that such benefits are relatively small in scale, and consist primarily of positive rights, *any* violations of negative rights that can be demonstrably allocated to the mine would be likely to tip the balance against its opening.

Unfortunately, things are not clear-cut even in this area, which raises further theoretical and practical issues surrounding the protection of human rights. Primary of these are; a) whether the apparent threats to human rights provided by the mine can be evidenced, and b) who bears which duties in relation to future violations of the rights of current persons.

The Damage to the future human rights of current persons

Let us begin by addressing the issue of the *future* rights of *current* persons. Thus far it has been established that the human rights supporter may only legitimately constrain the human rights of one currently existing individual if the exercise of those rights will lead to the violation of the human rights of another current individual. But what happens if the exercise of one's human rights today will violate the rights of another currently existing individual (who therefore meets the required standards of agency and reciprocity necessary for a clash of rights to occur) in twenty-five years?

Teghut could be seen to constitute just such a situation. Environmentalists maintain that the land around the mine will no longer be usable for farming.⁴³ As such, once the mine closes, the traditionally agrarian people of the area will be left with no source of income. Furthermore, there are additional concerns surrounding health and safety issues after the mine's closure. As was described in a recent newspaper article on the issue:

In order to set up the tailing structure, the company plans to change the course of the Kharatanots River. Environmentalists

⁴³ Matosian, M., ...

worry that the new course will only be maintained for 25 years - the life of the mine - after which there is no guarantee that the company will continue to remediate the artificial flow.⁴⁴

There seems to be no problem with claiming that such situations constitute clashes of rights. As Parfit states, when it comes to moral mathematics, “(r)emoteness in time has, in itself, no more significance than remoteness in space.”⁴⁵ The difficulty arises when we try to assert what action should be taken when the effects of the violation are felt so long after the action which caused them.

It is commonly thought that, when it comes to human rights protection (especially in relation to climate change), there are two approaches which a government may take; it can either mitigate against a future problem by taking action now to prevent its occurrence, or it can adapt to that problem as and when it occurs. In most situations, governments will mitigate against foreseen problems and adapt to unforeseen ones, but, according to the logic of human rights, there is no necessity for them to act in such a fashion. Provided human rights are protected, governments may choose to allow the occurrence of current actions which could violate human rights in the future (like destroying arable lands to build a mine), provided that they adapt their behaviour to prevent such violations before they occur (by providing locals with an additional source of income after the mine has closed). Indeed, one might even claim that the government has a duty to adapt, rather than mitigate in such circumstances, since, in doing so, it ensures that the right to work of the villagers is adequately met in the present without unavoidably violating that right in the future.

The problem surrounding such choices however, is that they require a level of foresight which is impossible to possess. The government cannot know whether it will be in the necessary economic situation to be able to provide income to the people of Teghut, or to be able to maintain the diverted river in twenty-five years; just as it cannot know whether the river will require maintenance, or whether the villagers might not discover their own source of employment.

It seems then, that, with regard to the right to work of current persons, tough decisions will need to be made about which rights should be

⁴⁴Copper, ...

⁴⁵ Parfit D., *Reasons and Persons*, Oxford University Press, Oxford, 1984, pp. 356-357.

prioritised at which time. While we might not agree with the choices of the government with regard to such decisions, it is difficult to claim with any certainty that such choices represent a violation of human rights at the present time.

Perhaps, then, a more profitable line of attack for the environmentalist would be to highlight the deforestation aspect of the mine. According to experts from the World Bank, there will be no forest remaining in Armenia within 20-30 years, creating nationwide desertification within the lifetime of current citizens.⁴⁶ Such a problem will prohibit almost all food-production, thus having a devastating effect upon human rights. This is not a problem which can be adapted to; it is a problem which must be mitigated against. The only way in which desertification can be prevented is for the government to take action now, in the form of stopping deforestation and promoting reforestation.

Unfortunately for environmentalists, such a fact still fails to necessitate that the Teghut mine must be stopped on human rights grounds. As Armenia's Minister for Nature Protection, Vardan Ayvazyan highlights, "...only 60 thousand cubic meters of wood will be cleared. According to a study by the World Bank, illegal logging in Armenia comes to an annual volume of 600-700 thousand cubic meters of wood. These are more serious numbers."⁴⁷ In other words, the fact that a coherent support for the human rights doctrine requires that the current rate of deforestation be drastically slowed does not necessitate that the specific trees in the Teghut forest be saved. This is especially true when we consider that illegal-logging by companies, which is responsible for infinitely more of the damage to Armenia's forests than a single mine, has no obvious human rights benefits. Moreover, as ACP director, Gagik Arzumanyan has made clear, the company will plant two new trees for every one they cut down.⁴⁸

⁴⁶ Armenian Environmental Network Issues Statement About PACE Declaration No. 503 on Teghut Mining Project, 27/01/2012, Available at:

http://www.armeniatree.org/environews/aen_012712.htm (February 2012)

⁴⁷ Copper, ...

⁴⁸ Armine Tokhmakhyan cautions against simply focussing on numbers planted as evidence of the fight against desertification. As she puts it; "Now, in Armenia it's very trendy to do tree plantings. Officials do it. But they just come, plant, and go away. These beautiful trees dry out very beautifully. In ATP it is different, we always monitor the process. If something is dried out, we replant with new seedlings. It's difficult and different. So when the representatives of ACP, this

Clearly, it is difficult to conclusively demonstrate that this specific piece of deforestation constitutes a human rights violation. While deforestation in general will lead to human rights violations by creating desertification, it is impossible to demonstrate that deforesting a maximum of 1200 hectares⁴⁹ of forest in Teghut will do so specifically. Desertification will not occur unless a great many other trees in Armenia are also felled. As such, the deforestation of this relatively small area of forest is neither necessary nor sufficient for desertification to occur. It is therefore not clear that such an action could be said to have caused desertification and the human rights violations that result from it in any meaningful way.

Immediate damage to the human rights of current persons

At this point, those individuals who would like to consider themselves both environmentalists and human rights supporters may be starting to despair. It seems as though many of the seemingly valid arguments of the former against the Teghut mine are ruled out by a coherent commitment to the latter. However, regardless of its apparent failings in seemingly supporting the mine's creation by overruling a wave of objections which many would have viewed as morally sound, the human rights doctrine might yet prove to be the strongest weapon available to the mine's opponents. If it could be demonstrated that building the mine would rapidly lead to the violation of current persons' human rights, then doing so would have to be outlawed under a human-rights-based morality. And, as noted earlier, if the mine could be outlawed on human rights grounds, the position of its opponents would be greatly strengthened due to the fact that the human

Vallex Group, say they are going to replant, we do not know when this territory will again become a forest or whether it will become a forest at all.” **Tokhmakhyan A.**,

⁴⁹ It should be noted that this number is the worst-case-scenario highlighted by environmentalists- **Mkrtchyan G.**, *Occupy Teghut?: Year begins with new protest of mining exploitation*, 11/01/2012, Available at: http://armenianow.com/social/environment/34551/armenia_teghut_foreign_environment_campaign (February 2012)).

According to the government, the figure could actually be as low as 180 hectares- *Only 10% of Armenia's environmentalists are qualified experts* – Vallex Group President, 17/02/2012, Available at: <http://news.am/eng/news/93744.html> (March 2012).

rights doctrine is a widely-accepted moral standpoint which has been encoded within international law and ratified by the Armenian government.

When asked if there would be any human rights concerns with regard to the mine, Masarjian replied; “I think that having access to clean air, and clean water, and land that hasn’t been poisoned by mining tailings is a human right.”⁵⁰ He was referring, as many environmentalists do, to the experiences of other mining operations in Armenia. There are widespread media reports suggesting that the residents of Alaverdi - where, in the early 1990s, ACP began operating a smelter which processes copper ore for a consortium of mining companies⁵¹ - have experienced increased levels of sterility, respiratory diseases, and birth defects.⁵² In addition to claims over harmful emissions, there is also widespread concern that the Teghut mine, through poorly managed tailings beds⁵³, will contaminate nearby rivers, which are used for irrigation and drinking water.⁵⁴

Such fears are fuelled by the failings of previous mining operations in Armenia. As Wallace explains;

...if the past history of the mining industry tells us anything, and these tailings beds are going to be constructed in the same shoddy fashion, then we do have a potential for serious issues. And not just for Armenians. That river flows down into the Debed, and the Debed is trans-boundary, it goes into Georgia...So Armenia’s issues become their issues as well.⁵⁵

For those seeking to condemn the mine on human rights grounds, the most important word in Wallace’s warning is *if*. Aside from the fact that there seems to be a distinct lack of independent scientific research to either back-up or dismiss the claims of the previous mines’ failings – they are the

⁵⁰ Masarjian J., ...

⁵¹ Armenia Tree Project Distributes Action Alert to Save Teghut Forest, 25/06/2007, Available at: http://www.armeniatree.org/atpnews/news_press_062507.htm (February 2012)

⁵² Copper...

⁵³ Tailings are the remains of the chemicals used to separate the copper and molybdenum from the ore. Tailings beds are containers used to hold these unneeded chemicals without risking environmental harm.

⁵⁴ Forest Copper Mine Triggers Controversy in Armenia, 28/01/2008, Available at: http://www.illegal-logging.info/item_single.php?it_id=3006&it=news (February 2012)

⁵⁵ Wallace K., ...

failings of previous mines. As such, they do not represent conclusive evidence that the mine in Teghut will have the same effects. Indeed, ACP maintains that it has undergone painstaking research and safety controls to ensure that such problems will not occur in their mine.⁵⁶ When concerns over the potential damage to human rights that mining causes, evidenced by previous experiences, are levelled at ACP, the company simply points to its Environmental Impact Assessment (EIA). Such an approach seems reasonable. The fact that other mines may have had a devastating impact upon human rights through poor safety controls does not constitute sufficient evidence that the mine Teghut will also do so – particularly if the science demonstrates that it will not.

The problem is that the EIA was conducted by Lernametalurgiai Institute cjsc (LMI), and LMI are owned by ACP's parent company, Vallex.⁵⁷ There have been widespread criticisms that the EIA lacks impartiality and contains vast errors with regard to its cost/benefit analysis, using double price standards, showing lower costs and higher benefits.⁵⁸ Wallace states that such criticisms seem justified, and that the best way for Vallex to avoid them would be to carry out an independent assessment:

I think we have to ask for science on this. If I'm diagnosed with cancer by a doctor, I'm going to get a second opinion. I think, with all the red book species that are up there, that's the least we can do. Let's go for a second opinion. Let's get an independent company to do this.⁵⁹

Given the context, Wallace's demands seem far from being those of an environmental extremist. As Policy Forum Armenia's report notes, It is to be expected that the environmental impacts stated within a company-sponsored study may be underestimated. It is typically the responsibility of the government to

⁵⁶ Forest ...

⁵⁷ **Wallace K.**, Teghut II: The Players, (05/03/2012), Available at: <http://www.armenia-environment.org/2012/03/05/teghut-ii-the-players/> (April 2012)

⁵⁸ For a more detailed analysis of such criticisms, see: **Sanasaryan H.**, The Exploitation of the Teghut Mine will have Disastrous Consequences, (06/03/2012), Available at: <http://hetq.am/eng/articles/11561/the-exploitation-of-the-teghut-mine-will-have-disastrous-consequences.html> (April 2012)

⁵⁹ **Wallace K.**, ...

commission an independent assessment and to include public participation in its analysis.⁶⁰

And so arises perhaps the first indisputable human rights concern surrounding the events in Teghut. It is widely accepted that governments are primarily responsible for taking all reasonable, appropriate steps to safeguard the human rights of their citizens. Such duties cannot straightforwardly be attributed to corporations.⁶¹ As such, it is the government's duty to ensure that the actions of companies operating within its territory will not harm the human rights of its citizens. In failing to demand that an independent EIA be carried out – and, indeed, in failing even to express any challenges or reservations to findings presented to them⁶² – the government has failed to meet such a duty⁶³.

Of more concern are the obvious problems with even LMI's EIA. ACP openly acknowledges that its tailings bed will be clay-lined. Such liners are known to leak over time. High Density Polyurethane (HDPE) liners offer far greater protection and are the industry standard in modern mining.⁶⁴ In allowing ACP to use a cheaper, less-effective lining, the government again takes its duty to protect its citizens from human rights violations too lightly.

ACP attempts to subvert such concerns with assurances that the tailings bed will be closely monitored in order to prevent such leaks. There are, however, problems with such a claim.

Firstly, even if we accept that ACP has the expertise and ability to maintain these tailings safely, there is no reason to believe that they will do so beyond the life of the mine. As such, in order for human rights to be

⁶⁰ The State ..., p. 28.

⁶¹ **Humphreys S.**, ..., p. 10.

⁶² The State ..., p. 28.

⁶³ Similarly, if there are widespread reports of unusual numbers of health concerns in Aliverdi, it would seem that the *minimum* the government's correlative duty requires is to conduct an investigation into possible causes, and quite possibly to close down the suspect smelter in the meantime

It should be noted here that, as this article was completed, it emerged that a second EIA, designed to "fill the gaps" of the one carried out by LMI, had been carried out by the (apparently independent) company, Environmental Resources Management (ERM). The details of this second survey, however, have not been made available for public release. (**Wallace, K.**, Teghut IV: The Gate, 15/04/2012, Available at: <http://www.armenia-environment.org/2012/04/15/teghut-iv-the-gate/>) (April 2012)

⁶⁴ The State ..., p. 25.

protected, assurances would have to be made that some other body with similar expertise (presumably the government) would later assume the responsibility for maintaining these tailings beds. Such assurances are, thus far, lacking.

An even bigger problem is that there will only be one tailings reservoir. Even if ACP is certain that it has the capability to fix any problems which occur, it cannot guarantee that such problems will not occur at all. And if there are leaks within the tailings bed, those leaks will need to be fixed. The only way of making such fixes is to drain the tailings reservoir, but, in the absence of an alternative reservoir in which to temporarily locate the tailings, it seems impossible that any leaks could be repaired without emptying the entire contents of the tailings into the soil (thus somewhat negating the benefits of fixing the leak).⁶⁵

As a result of these uncontroversial problems alone, allowing the mine in Teghut to go ahead as currently planned would amount to an unreasonable and immediate endangerment of the human rights of current Armenians. Given these admitted problems, it would seem that the further problems which are raised by environmentalists concerning the other harms that will allegedly be caused by the mine at least merit investigation. According to the logic of human rights, the government is primarily responsible for sufficiently protecting the rights of its citizens by all means reasonably possible. Commissioning a second, independent EIA seems both reasonable and possible.

Conclusion

From a human rights perspective, the study of the problem concerning the Teghut copper-molybdenum mine requires considering the issue not only from a moral perspective, but also from a legal point of view, since solely moral standards have different manifestations in different cultures. At the same time, legal specification enables to not only overcome such difficulties, but also more clearly formulate requirements and the possible solution to the problem. Moreover, Armenia has ratified the main documents that define the scope of human rights protection and obligations. This enables to specify requirements and obligations more clearly,

⁶⁵ The State ..., p. 29.

eventually making the struggle for human rights and the steps taken more efficient.

The potential damage of the Teghut copper-molybdenum mine exploitation are viewed in the framework of four classes: damage to historical monuments, damage to endangered species of plants and animals, damage to the human rights of future generations, and damage to the human rights of the present generation. Considering other rights of the people living in the region (the right to work, the right to health, the right to food, etc.), prohibiting the exploitation of the mine – based on complaints regarding the first three classes – could be considered to be inconsistent with human-rights-based morality (and, quite possibly, the law). However, with regard to possible violations concerning the fourth class, the government should either ensure their prevention – by, for example, placing the company under an obligation to operate in accordance with the relevant requirements, or prohibit exploitation altogether.

Regarding the Teghut issue, the government of Armenia, which is supposed to ensure respect for the rights of its citizens according to ratified agreements, should:

- receive an independent evaluation of the environmental impacts of mine exploitation because the evaluation of only the Mining and Metallurgical institute is not sufficient for a full and impartial evaluation as the institute is correlated to the parent company;
- demand that the mining company increase the reliability of the protective layer within the tailings, using modern reliable equipment;
- demand that the mining company create a second alternative tailing, to be used in the case of the emergence of any problems related to the first one.