

## A Responsum Regarding the Environment and Air Pollution

By David Golinkin

**Responsa in a Moment**  
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**Question from Arad:** The Rotem Amfert company wants to open a new phosphate quarry at Sdeh Brir near Arad. It is 3.5 km. southwest of Arad (population 27,000), right next to the 2,500 Bedouin of El Fura, and 3km. from the Bedouin town of Kseifah (population 10,000). Sdeh Brir contains 65 million tons of phosphate, which is enough to be mined for 35 years. Four years ago, 5,800 residents of Arad signed a petition against this quarry. The Mayor of Arad then commissioned a telephone poll of Arad, which determined that 88% of the residents opposed the quarry. On May 22, 2005, the Arad City Council decided unanimously to oppose the quarry. Even so, in 2007 the Rotem Amfert Company renewed its request to open the quarry.

We object to this quarry for the following reasons:

1. According to an official letter of Hadassah Aden, District Engineer from February 26, 2008, quoting from a health impact study of Dr. Micha Bar-Hana and Dr. Yonatan Dubnov, public health experts, exposure to dust and radon *will lead to an increase of 4.25% in the general mortality rate in Arad, which means seven more people will die every year.* An unknown number of people will also contract lung cancer as a result of exposure to radon gas. It is clear that the effect will be even greater on the Bedouin who live in El Fura and Kseifa.
2. We do not trust the Ministry of Environmental Protection to have the power to stop the Rotem Amfert Co., if need be, in light of failure to do so in similar cases around the country.
3. Arad has a reputation for clean air. This open quarry will ruin the air and destroy Arad's tourism industry for generations.
4. If this quarry is opened, 2,500 Bedouin will need to be expelled from El Fura.

5. This quarry is not necessary. The area of Mt. Nishfeh in the Arava, which is far from any city, has 320 million tons of phosphates according to a report of the Geological Institute. It might cost more to mine, but that pales in comparison to opening a quarry near Arad, which will kill people, cause cancer, destroy Arad as a center of tourism and expel 2,500 people from their homes. In any case, Rotem Amfert would not lose money since the break-even price for phosphates is \$40 per ton while the current price is \$400 per ton.

What does Jewish law have to say about the environment in general and about air pollution in particular?

**Responsum:**

### **Introduction**

It is no secret that the world in which we live is in trouble. In the early 1970s, my father, Rabbi Noah Golinkin z"l, wrote a cantata entitled "Shabbat and Ecology". He wrote (p. 3):

I wanted to smell the fragrance of flowers,

but all I smelled was the exhaust from cars.

I wanted to see the sunset; all I saw was haze and smog.

I wanted to see the flowing brook; all I saw was brown water, a floating can, the fish were dead.

I wanted to see the mountain, but I saw the strip of a coal mine.

In place of a sunrise, I saw the shape of modern high-rise apartments, and I could see the sun no more.

My eyes, my ears, my nostrils, and my lungs were contaminated.

My food was contaminated.

By civilization.

Everything around me has changed.

I don't recognize the environment, the beautiful things that God has created.

It could be that in the early 1970s, many people were *unaware* of the environmental crisis. Today virtually *all* the citizens of western countries are very much aware of the crisis.

In Israel, for example, the garbage dump for Tel Aviv is now way down in the Negev; both the Sea of Galilee and the Dead Sea are in danger of drying up; and many rivers and streams are highly polluted and have caused numerous cases of cancer and death.

Globally, the entire planet is suffering from global warming: "100 year storms are now striking some areas once every 15 years" (*Newsweek*, July 2008, p. 45). Between 1990 and 2100, average temperatures are expected to rise between 1.8 to 4 degrees Centigrade (*Le Figaro*, August 8, 2008, p. 9). The oceans are being over-fished and common fish such as Atlantic blue-fin tuna may soon be extinct (*Environment News Service*, March 20, 2008). Finally, a new report found that 48% of the world's primates are vulnerable, endangered or critically endangered (*Time*, August 8, 2008).

In this responsum, I will present three general principals of a Jewish view of ecology, two important examples of environmental awareness and then reply to your specific question about air pollution.

### **I) Three Basic Principles of a Jewish View of Ecology**

1) The first theological premise of a Jewish view of ecology is that our Earth and the entire Universe belong to God. This past year was the *Shemittah* or Sabbatical year in Israel. The central verse about *Shemittah* appears in Leviticus 25:23: "והארץ לא תימכר לצמיתות כי לי כל הארץ" "But the land must not be sold in perpetuity *for the land is mine.*"

A similar idea appears in Psalm 24 (verse 1) which we recite on the High Holidays and on *Shalosh Regalim*: "לה' הארץ ומלוואה תבל ויושבי בה" "The Earth is the Lord's and all that it holds, the world and its inhabitants." Indeed, there is a beautiful Jewish custom that when a Jew buys a new book, he writes inside the book "לה' הארץ ומלוואה", "The Earth is the Lord's and all that it holds" and below that his name. In other words, we may be the temporary *custodians* of our property, but the Earth and all that it holds really *belong* to God.

Finally, Psalm 104 which we recited today on *Rosh Hodesh*, is a beautiful description of God's creation:

... O Lord, my God, You are very great; You are clothed in glory and majesty, wrapped in a robe of light; You spread the heavens like a tent cloth... [You] established the earth on its foundations, so that it shall never totter... You make springs gush forth in torrents; they make their way between the hills, giving drink to all the wild beasts; the wild asses slake their thirst. The birds of the sky dwell beside them and sing among the foliage. You water the mountains from Your lofts; the earth is sated from the fruit of Your work. You make the grass grow for the cattle, and herbage for man's labor that he may get food out of the earth... How many are the things you have made, O Lord; You have made them all with wisdom; the earth is full of Your creations. There is the sea, vast and wide, with its creatures beyond number, living things, small and great... All of them look to You to give them their food when it is due. Give it to them, they gather it up; open Your hand, they are well satisfied. Hide Your face, they are terrified; take away their breath, they perish and turn again into dust; send back Your breath, they are created, and You renew the face of the earth. May the Glory of the Lord endure forever; may the Lord rejoice in His works!

There is one verse, however, which would seem to take the opposite approach. In Genesis 1:28, God says to Adam and Eve:

פרו ורבו ומלאו את הארץ וכבשוה ורדו בדגת הים ובעוף השמים ובכל חיה הרומשת על הארץ.

Be fruitful and multiply, fill the earth *and subdue it, and rule over the fish and the sea* and the birds of the sky and all the living things that creep on earth.

As Rabbi Robert Gordis points out (pp. 113-114), the traditional Christian interpretation was that this verse gave sanction to the exploitation of nature – to subdue the earth and to rule over the fish, the birds, and all living things. But those theologians failed to notice that the very next verse (1:29) declares that Adam and Eve may eat only plants and trees; permission to eat meat is given only centuries later after the flood in Genesis 9:3-4.

So what does "and subdue it" mean? According to our Sages (*Yevamot* 65b), it comes to modify the first half of the verse "be fruitful and multiply" – since subduing enemies in war is primarily a male undertaking, the verb "subdue" teaches that the *mitzvah* of propagating the human race falls upon the male rather than the female. In any case, "and subdue it" does *not* mean that we have the right to subdue the environment.

2) A second theological basis for ecology is called "Stewardship" and is found in Genesis 2:15: " וַיִּקַּח ה' אֱלֹהִים אֶת הָאָדָם וַיְנַיִחֵהוּ בְּגֵן עֵדֶן לְעֲבֹדָהּ וּלְשֹׁמְרָהּ " "The Lord God took the man and placed him in the Garden of Eden *to till it and to guard it*". According to this verse, God put man in the Garden of Eden to work the land and to *protect the land*. In other words, human beings are *stewards* of the earth.

This idea was expanded upon in a beautiful midrash found in *Kohelet Rabbah* (Parashah 7, ed. Vilna 20b):

When the Holy One Blessed be He created Adam, he took him and made him pass before all the trees of the Garden of Eden and He said to him: "See My works, how lovely and how excellent they are, and everything that I have created, for you I have created... Pay attention that you should not corrupt it, there is no-one to fix it after you".

In other words, *God* created the world, but he appointed *Man* as the steward to guard the world. If *Man* corrupts or destroys the world, *God* will not come to the rescue to fix it.

3) A third reason to protect the environment is not *theological* but *logical*: A person who harms nature harms himself! This idea appears in two rabbinic passages. The first is a story found in *Bava Kamma* 50b (cf. *Tosefta Bava Kamma* 2:10):

Our Sages taught: ...A certain man was removing stones from *his* domain to the *public* domain when a *hassid*, a pious man, found him doing so and said to him: "Fool! Why do you remove stones from a domain that is *not* yours to a domain which *is* yours!?" The man laughed at him. A while later, the man had to sell his field and was walking on the same public domain [where he had put the stones] and he stumbled over those very same stones. He said to himself: "The pious man was right when he said to me: 'Why do you remove stones from a domain that is *not* yours to a domain which *is* yours?' "

In other words, our *private* property is not really ours. Eventually it is sold or passes to others. But "*reshut harabbim*", the *public* domain, belongs to all of us and if we pollute it, we will have to live with our own garbage.

A similar idea is expressed in a classic midrash (*Vayikra Rabbah* 4:6, ed. Margalot, pp. 91-92):

Rabbi Shimon Ben Yochai taught: It can be compared to people who were in a boat and one of them took a drill and began to drill under his seat. His fellow passengers said to him: "Why are you doing this?!" He said to them: "What do you care? Am I not drilling under me?!" They replied: "Because you are sinking the boat with us in it!"

The world is like one boat; if one passenger drills a hole under his seat, we all sink!

The same idea was expressed by Senator Adlai Stevenson (1900-1965), one of the founders of the United Nations:

We travel together, passengers on a little spaceship, dependant on its vulnerable reserves of air and soil, all committed for our safety to its security and peace, preserved from annihilation only by the care, the work, and... the love we give our fragile craft (Raskas, p. 78).

Thus far, we have presented three reasons for our tradition's support of ecology: That the Earth is the Lord's and all that it holds; that God put man on earth as a steward to work the land and to protect it; and that a person who harms nature, actually harms himself.

## **II) Two Important Examples of Environmental Awareness**

Now I will present the Jewish attitude towards two specific issues: the obligation to plant trees and the prohibition of *Bal Tashhit* or unnecessary destruction of animals, plants and trees.

1) Modern Jews think that the Jewish love of trees began in 1901 when the Fifth Zionist Congress founded the Jewish National Fund. But, in truth, it actually has its roots in rabbinic literature 1,800 years ago:

Rabbi Yehudah son of Rabbi Simone asked in *Vayikra Rabbah* (25:3, ed. Margalio, pp. 572-573).

It says in Deuteronomy 13:5: "After the Lord your God you shall walk". Is it possible for man of flesh and blood to walk after God... about whom it is written "For the Lord your God is a consuming fire" (Deut. 4:24)!? Rather, in the beginning of creating the world, God's first action was to plant, as it is written "And the Lord God planted a tree in Eden" (Genesis 2:8). So too, when you enter the land of Israel, make the planting of trees your first order of business [as it is written (Lev. 19:23)], "When you come into the land, you shall plant fruit trees".

In other words, we are commanded to imitate God – *Imitatio Dei*. How can we imitate God who is compared to fire? By planting trees first, just as God did in *Gan Eden*.

So too, *Midrash Tanhuma (Kedoshim, parag. 8)* contains a Midrash on that same verse in Leviticus 19:23 "When you come to the land, you shall plant fruit trees". God said to the Jewish people: "even if you find her filled with all good things, do not say 'we will sit and not plant'; rather be careful to plant - 'you shall plant fruit trees'. Just as you entered and found plants planted by others, so too should you plant for your children. A person should not say 'I am old, how many years shall I live, why should I exert myself for others, tomorrow I will die' ".

This is then illustrated by a story of the Emperor Hadrian who saw an old man on the road who was planting fig trees. "Hadrian said: 'You are old and exerting yourself for others'. [The old man] replied: My Lord the king, I am planting. If I am lucky, I will eat the fruits of my planting. If not, my sons will' ". (*ibid.* and cf. *Ta'anit* 23a).

Thus, according to the Midrash, we have an obligation to plant fruit trees. If we live to eat from them, that will be wonderful; if not, our children will benefit from them.

2) A second basic *halakhah* of Jewish ecology is the law of "*Bal Tashhit*", you shall not destroy, found in Deuteronomy 20:19-20.

When you besiege a city for a long time, making war against it in order to take it, you shall not destroy (*bal tashhit*) its trees by wielding an axe against them. You may eat from them, but must not cut them down, for are the trees of the field human beings, that they should be besieged by you?! Only the fruit which you know are not fruit-bearing you may destroy and cut down, in order to build siege-works against the city that makes war with you...

This passage would seem to be a narrow prohibition – do not cut down fruit trees in order to build siege works. But our Sages expanded this prohibition of *Bal Tashhit* in different directions. *Sifrey Devarim (Piska 203, ed. Finkelstein, p. 239)* says that it comes to include diverting water from the trees so that they wither and die. Maimonides added (*Hilkhot Melakhim* 6:8) that this prohibition applies not just during a siege but whenever a person cuts a fruit tree in a wanton fashion. However, he did allow cutting down a fruit tree if he was harming other trees. Other rabbis, however, prohibited this as well (Meir Ayali, *Tura*, 1989, pp. 135-140).

The Sages also extended *Bal Tashhit* from nature to human artifacts: "Whoever breaks vessels or tears garments or destroys a building or clogs up a fountain or does away with food in a destructive manner, violates the prohibition of *Bal Tashhit*" (*Kiddushin* 32a).

The general Jewish attitude towards *Bal Tashhit* or wanton destruction was summed up by Rabbi Aaron Halevi of Barcelona (ca. 1300) in his *Sefer Hahinukh* (*Mitzvah* 529):

...This is the way of the pious and those of good deeds – they have peace and rejoice in that which benefits people and they bring them closer to Torah and they never destroy even one grain of mustard in the world, and they are upset by any destruction that they see. And if they can save, they will save anything from destruction, with all their might.

### **III) Air Pollution**

Now, we shall reply to your specific question (based on Golinkin).

1. The *Tosefta* rules (*Bava Batra* 1:10, ed. Lieberman, p. 131) that *l'khatkhila*, before the fact, "large furnaces must be built at least 50 *amot* (or 25 meters) from the city". (For an interesting parallel in ancient Greek law, see Lieberman in *Tarbitz* 40 (5731), p. 416.) This law was codified by Rabbeinu Asher (*Bava Batra*, Chapter 2, parag. 25), by his son Rabbeinu Ya'akov ben Asher in the *Tur* (*Hoshen Mishpat* 155) and in the *Shulhan Arukh* (*Hoshen Mishpat* 155:23). Indeed, there was an ancient *takkanah* [rabbinic enactment] not to build furnaces in Jerusalem in the Second Temple Period (*Bava Kamma* 82b). The Talmud explains (*ibid.*) "because of *kutra* [smoke]". Rabbi Reuven Bulka explained this passage in modern terms: "this is because the pollutants which are emitted by furnaces harm the inhabitants of the city who need to breathe fresh air". Therefore, digging an open-air quarry in close proximity to 40,000 people is forbidden before the fact because it pollutes the air.
2. Such a quarry is also forbidden before the fact according to the halakhic principle of "*geirey diley* [his arrows]", In other words, it is forbidden for a person to stand in his domain and to shoot arrows elsewhere claiming that he did not intend to cause damage (*Bava Batra* 22b; Maimonides, Laws of Neighbors 10:5-6; *Entziklopedia Talmudit* s.v. *Geirey Diley*, volume 6, cols. 35-36 and s.v. *Harhakat Nezikin*, Volume 10, cols. 628-631, 663-666). In one of the laws on this subject, Maimonides rules (*ibid.* 11:1, which was copied verbatim by the *Shulhan Arukh* in *Hoshen Mishpat* 155:34): "A person who made a threshing floor on his own property or a latrine *or a type of labor which makes dust and dirt and the like, must distance the [source of pollution]*

*so that the dirt or smell of the latrine or the dust should not reach another person so that it should not harm him.* Even if the wind [was responsible for bringing the dust or the smell in the direction of another person], he [=the polluter] is required to distance [the source of pollution] *so that they should not reach [other people] and cause damage...for all these are like a person who damages by shooting his arrows*". If this was true for a private laborer in talmudic times, how much the moreso is it true for a phosphate quarry, which will pollute three towns with dangerous, life-threatening air pollution. As the authors of the *Tosafot* said (*Bava Kamma* 23a s.v. *u'l'hayeiv*): "and from this we can derive that a person should be more careful not to harm others than not to be harmed by others".

3. Finally, what happens if Reuven built a furnace or other source of pollution near Shimon and Shimon did not protest – can Shimon protest a few years after the pollution began? The classic reply is found in *Bava Batra* (23a): "Rav Nahman said in the name of Rabba bar Abuha: There is no *ḥazakah* for damages. Rav Mari said: The reference is to smoke. Rav David said: The reference is to the bad smell from latrines." *Ḥazakah* means the acquisition of a right by a person causing the damage to continue causing that damage in the future, because no-one has protested. This Talmudic passage says that if Reuven produced smoke pollution or a bad smell for three years and Shimon did not protest, there is still no *ḥazakah* and Shimon *can* protest at any time.

A good example of the application of this law is found in the Responsa of Rabbi Abraham son of Maimonides (1186-1237; ed. Freimann, No 101). Reuven complained that Shimon was ruining his life because he had built a cloth-dyeing pit and built a fire and caused smoke in Reuven's direction. Shimon replied: I bought the house and turned it into a dye-shop 15 years before you bought your house [so I have a *ḥazakah* to run my dye-shop]. Rabbi Abraham ruled: About smoke and the like, the rabbis said that there is no *ḥazakah* for these damages... Reuven's argument is therefore upheld and Shimon must do away with this damage." (Sichel, pp. 31-32).

In conclusion, digging a huge phosphate quarry near three towns inhabited by 40,000 people is absolutely forbidden by Jewish law before the fact and can also be stopped after the fact. I hope and pray that you and the citizens and elected officials of Arad will succeed in stopping this dangerous and unnecessary project.

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