

## Listening 4L6 – Turn Off That Light!

**Mike Kuplowski:** Welcome to the February edition of *Our World*. My name is Mike Kuplowski. Our main focus tonight will be on pollution. Later on, we will be speaking about pollution from oil spills, which have recently been in the news, but first we are going to talk about a type of pollution which many people have not even heard of. Susan Conroy is the Press Liaison officer for the *Canadian Darker Skies Association* and is here tonight to talk to us about a problem that has been estimated to cost between a quarter and one third of global energy output. Susan, those figures can't be correct, can they?

**Susan Conroy:** Many independent organizations have costed this phenomenon of light pollution and the figures usually come out in that area, somewhere between 25 and 35% of total energy costs are being completely wasted by wasteful or inefficient use of lighting, especially in the more urbanized areas of the richer countries of the world. Light pollution is one of the most pervasive forms of pollution in the modern world and yet it is something that very few people know much about even though, conversely, it is the form of pollution that people come into contact with most often on a daily basis.

**Mike Kuplowski:** Could you just give us a few ideas of what, in your mind, constitutes light pollution? I understand one of the most serious problems is that of light escaping up into the skies above our cities with the resulting glare preventing us from seeing all the stars that were once visible.

**Susan Conroy:** That is what I would term a symptom of the problem and not necessarily the most serious consequence. I would recommend your listeners, if they live in what is termed a built up area, to go outside, after listening to this great program of course, and to look up into the sky. I would be surprised if any of them managed to see more than five to ten stars. If they had done this 20 years ago, then they would be talking about hundreds and hundreds. This is a problem that is getting worse, the whole light pollution situation is deteriorating, which means we are wasting more and more money. If I may, I would like to give you just a couple of figures which illustrate this light pollution problem very well.

**Mike Kuplowski:** Of course, go ahead.

**Susan Conroy:** The *International Dark-Sky Association* has estimated that, here in the USA, 1.5 billion dollars is spent every year generating electricity for light which is then wasted. That's the equivalent of about 6.000.000 tons of coal to produce that electricity, just wasted! The United States' reliance on imports of oil could be reduced in a matter of months if a few basic regulations were introduced and enforced.

**Mike Kuplowski:** What causes this light pollution, Susan? Is it just badly positioned streetlights that shine up into the sky?

**Susan Conroy:** Well, that is true, it is a major contributory factor in all of this. Light pollution is not only light that is shining up into the sky which blocks out the stars we

were just talking about. Light pollution is also when areas are over-lit, for example, or lighting is badly designed or badly positioned, which then creates excessive glare. This can obviously be dangerous if drivers are affected.

**Mike Kuplowski:** I know so many people are worried about security and I imagine this is why huge areas of our cities are, in your words, over-lit.

**Susan Conroy:** Many studies have shown there is little connection between lighting and crime. Besides, much of the lighting which is badly designed creates very strong light and shadow contrasts, which strangely enough, actually creates good hiding places for the very criminals we would like to be protected from.

**Mike Kuplowski:** So what changes would you like to see implemented, Susan?

**Susan Conroy:** There are some very basic things that can be changed. There needs to be a standard for street lighting which eliminates completely above-horizontal light escape. By that I mean we can't continue to use inefficient street lighting equipment which enables a lot of the light emitted to escape upwards into the sky. That is the first priority. Next, we need tough restrictions on how much light is used to illuminate a given area. That way, we avoid the problem of what is called light trespass, where light escapes from the area that it is supposed to illuminate and goes, for instance, into nearby windows or roads.

**Mike Kuplowski:** It's funny you should mention that. My brother lives near a parking lot and he says, at night, he doesn't even need to switch on his kitchen light because the light from the parking lot lighting is so strong.

**Susan Conroy:** This is what we are saying. We don't have a problem with security lighting in any number of parking lots, stores, or even sports centers. But, and this is an important but, the lighting needs to be suitable and, above all, directed correctly. We are becoming a society obsessed with turning night into day but I can tell you now, not everybody finds this situation satisfactory.

**Mike Kuplowski:** Susan, if we can now turn to what we as individuals can do to lessen the problem or at least not add to it. This is clearly something in which government and business have a very big contribution to make, but is there something we can do ourselves?

**Susan Conroy:** First of all, I would recommend writing to your local representatives as this is an issue which needs as much support as possible. Then, there are things we can do in our own home. If you use lighting, be it security lighting or lighting for your barbecue in the garden, just make sure it is well directed, by which I mean angled downwards, and in that the light source itself, the bulb I mean, has a good cover on it. If you are using a security light, you want it to illuminate the area immediately in front of your house and not your neighbors' houses or half of the rest of the street. Doing this will not make your house safer! If you want to illuminate the front of your house for any reason, do it from above with a light fixture attached to the gutter of your roof for example and not using a powerful spotlight placed on the lawn in front of your house.

Most of the light in this setup will just go into the sky and all of the amateur astronomers among you will continue to get frustrated as you search the sky for stars.

**Mike Kuplowski:** Well I, for one, have learnt a lot this evening. And you have given us a lot of food for thought the next time we look up into an increasingly orange sky at night. Susan Conroy, thanks for your time tonight.

**Susan Conroy:** You're welcome.

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