

If Then

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This is a silent film, with the screen divided vertically in two: on the left, images of what we are ‘now’ doing; on the right, images of what will therefore happen.

Duration of the film is critical: too short and the point won’t be made, too long and the audience will be overwhelmed into passivity or boredom. Five minutes might be right.

I describe below possible images; I also identify and articulate the causal connections. I also provide a few now-outdated statistics (they were gathered in the early 90s) – I had initially thought the statistics could be voiced-over, but I think greater effect is achieved with silence.

IF	THEN	issue	statistics
<ul style="list-style-type: none"> - people having sexual intercourse - babies being born - anti-abortion protests 	<ul style="list-style-type: none"> - masses and of people, most of whom are children - deforested desert areas - thirsty people - hungry people - poor people 	<p>overpopulation</p> <p>Rapid population growth is often accompanied by severe environmental degradation, including deforestation, desertification, and soil erosion.</p>	<p>Half of the world is under 25 years of age.</p> <p>Less than half the world’s women uses birth control.</p>
<ul style="list-style-type: none"> - people going to MacDonaldis, Wendys, Burger King, etc. and buying and eating hamburgers - people having outdoor barbecues 	<ul style="list-style-type: none"> - rainforest being clear cut - rainforest burning - barren stretches of dry, dusty earth - empty grocery store shelves 	<p>loss of tropical forests</p> <p>Rainforests are cut or burned for cattle.</p> <p>Loss of tropical forests increases soil erosion.</p> <p>Crop breeders need continued access to the genetic material of wild relatives often found in rainforests.</p>	<p>100 acres of rainforest destroyed each minute.</p> <p>Half a million acres of rainforest are lost each day.</p> <p>Half of the dozen crops which provide 90% of the world’s food are descended from rainforest plants.</p>

	<ul style="list-style-type: none"> - people lining up at hospitals - people in public wearing masks to protect against contagion - empty swimming pools - one bottle of water left on a grocery shelf - people at oxygen stations - huge museum display of extinct species - floods, droughts - ships stuck in waterways - empty newspaper stands - new house construction abandoned - closed Ikea stores 	<p>Many medicines come from the rainforest</p> <p>Rainforests are crucial to our fresh water supply.</p> <p>Rainforests supply oxygen.</p> <p>Rainforests maintain our climatic stability.</p> <p>Loss of tropical forests increases flooding and droughts,</p> <p>silting of waterways, and timber shortages.</p> <p>Oils, latexes, and resins are produced in rainforests.</p>	<p>The typical four-ounce hamburger patty represents about 55 square feet of tropical forest which would statistically contain a 60 foot tall tree, 50 saplings, seedlings representing 20-30 different tree species, two pounds of insects representing thousands of individuals and more than a hundred different species, a pound of mosses, fungi and microorganisms, and a section of the feeding zone of dozens of birds, reptiles, and mammals.</p> <p>Rainforests house more than half the world's animals and plants.</p> <p>By 2000, half the world's rainforests will be lost to timber and agriculture.</p> <p>At present rate of destruction, by 2030 we could be living in a burning, barren desert.</p> <p>At current rate of destruction, the world's rainforests will be gone within the lifetime of today's high school student, i.e. by 2050.</p>
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<ul style="list-style-type: none"> - people buying daily newspapers - forests being logged - paper mills in operation - people making photocopies - acres and acres of books sold for a few cents at big box stores 	<ul style="list-style-type: none"> - cleared land - ‘forests’ containing only thin trees as far as the eye can see - barren, dusty land - wide, shallow muddy rivers - Ikea stores closed - People’s firewood piles miserably low. - storms - sign indicating no hunting licenses for sale 	<p>loss of temperate forests</p> <p>Without trees, topsoil erodes away.</p> <p>Forests prevent erosion and sedimentation of rivers.</p> <p>Forests provide wood for building.</p> <p>Forests provide fuelwood for cooking, lighting, and heating.</p> <p>Forests regulate weather patterns.</p> <p>Forests provide habitat and food for animals.</p>	<p>One issue of the Sunday Times requires 75,000 trees.</p> <p>In the U.S. one acre of forest is lost every five seconds.</p> <p>It takes more than 100 years for a tree to grow to a 4” diameter.</p> <p>Logging is depleting the world’s forests much faster than they are being reforested or can regenerate.</p> <p>32% of the forests are written off after logging because of improper logging techniques.</p> <p>40% of replanted forests don’t have enough surviving trees to support future logging.</p>
<ul style="list-style-type: none"> - grocery store meat aisle overflowing - logging operations - paving operations creating roads and parking lots - new development on ‘empty’ land - all available land being cultivated, mega-farms 	<ul style="list-style-type: none"> - barren, dusty land 	<p>loss of arable land</p> <p>Cattle grazing compacts the soil rendering it useless for crops and reducing ability to absorb water, increasing flooding when there’s rainfall; compaction also prevents plants from taking root, which means topsoil blows/erodes away.</p> <p>Forests protect watersheds.</p>	<p>Producing one pound of meat requires 100x more water than producing one pound of wheat.</p> <p>We’re losing topsoil it at a rate of 1 cm/4-8 yrs; it takes 75 years for 1cm of new topsoil to form.</p>

		<p>Without trees, topsoil erodes away.</p> <p>Overworked land becomes nutrient-deficient and new soil doesn't form.</p>	
<ul style="list-style-type: none"> - headlines indicating governmental decisions to provide subsidies to oil and automobile companies - people buying new cars, SUVs, pick-ups, minivans, and RVs - people driving SUVs, pick-ups, and minivans for short, single errands - roads clogged with standstill traffic - people eating hamburgers - clearcutting -cattle farming - headline re Bush banning use of phrase 'global warming' in the White House - private swimming pools - people watering their lawns - people washing their cars 	<ul style="list-style-type: none"> - droughts - hurricanes - heat waves - snowstorms in previously snow-free areas - coastal areas flooded out of existence - polar cap ice breaking off and falling into the ocean - time lapse of icebergs melting - mudslides in the Alps - forest fires - oil line to Alaska breaking, oil spewing out onto land - collapsed buildings 	<p>global warming</p> <p>Carbon dioxide emissions lead to global warming, which leads to increased droughts, floods, hurricanes, and severe storms, as well as other climate changes.</p> <p>The sea level will rise.</p> <p>Overall temperature will rise.</p> <p>Forest fires will increase due to insufficient moisture.</p> <p>Pipelines will rupture and building foundations will collapse due to the melting of the permafrost.</p>	<p>Over half of the warming trend is caused by burning fossil fuels.</p> <p>Cars produce 25% of greenhouse gases.</p> <p>40% of urban traffic in North America is made up of commuters travelling less than 7 km.</p> <p>25% of global warming is caused by unsustainable farming and forestry.</p> <p>Methane accounts for about 16% global warming, and much of methane coming from rice and cattle production.</p> <p>Based on current trends, the water level of the ocean will rise 20cm by 2030, wheat production will decrease by 18%, soybean production by 53% and corn production by 43%.</p> <p>Global warming will favour warm weather insect species with short life spans that can adapt and evolve quickly, so crop losses due to insects are</p>

	<ul style="list-style-type: none"> -grocery store shelves relatively empty - remaining food exorbitantly priced - people lining up at grocery stores to get rationed food - people lining up at hospitals - people at large wearing masks to protect against epidemics 	<p>Crops will be lost to drought and insects.</p>	<p>expected to increase and mid-latitude countries could experience an influx of tropical diseases.</p> <p>Falling water tables are now found on every continent. Water being moved out of irrigated agriculture to satisfy growing residential demands. Soil erosion exceeds new soil formation on 35% of the world's cropland.</p> <p>Global water use doubled between 1940 and 1980; expected to double again by 2000.</p> <p>We are already committed to substantial climate change due to what we've done already (which we can't undo, of course).</p>
<ul style="list-style-type: none"> - people driving cars, SUVs, pick-ups, RVs, minivans - people using fuel for atvs, snowmobiles, seadoos, motor boats, lawnmowers - people heating their homes - people turning on air conditioners - huge box stores filled with people, their parking lots filled with cars - people buying, buying, 	<ul style="list-style-type: none"> - blackouts over vast areas - people lighting candles and camp stoves - house fires - people being very cold - people being very hot - cars abandoned - trucks stopped - grocery shelves 	<p>dwindling fossil fuel resources</p>	<p>Global annual consumption of fossil fuels equals about a million years' worth of natural production.</p> <p>World supplies of oil are likely to be depleted by 2025.</p>

<p>and buying</p> <p>- industry making, making, making</p>	<p>empty</p>		
<p>- pesticides being sprayed on crops</p> <p>- geneticists at work in the lab</p> <p>- headlines re companies falsifying data</p> <p>- headline re 25% of chemicals sent abroad by U.S. are banned, restricted, or unregistered</p> <p>- headlines re Dow Chemical profits etc.</p> <p>- runoff from crop land going into the ocean</p>	<p>- people lining up at hospitals</p> <p>- signs at lakes “Do not eat the fish” and “Unsafe for swimming”</p> <p>- babies with birth defects</p> <p>- line-ups at fertility clinics</p> <p>- headlines re cancer rates skyrocket</p> <p>- people vomiting from drinking polluted water</p> <p>- classrooms full of learning disability students</p> <p>- headlines re cancer rates skyrocketing</p> <p>- hospitals dedicated to cancer</p>	<p>pesticides</p> <p>The more we use pesticides, the more resistant crops become to them, so the more we use them.</p> <p>Pesticides cause birth defects, cancer, etc.</p>	<p>85-95% of all our exposure to poisonous chemicals comes through food.</p> <p>60% of the pesticides in use in the U.S. have been incompletely analyzed for birth defects, 80% for cancer, 90% for chromosome damage.</p> <p>1 in 10 children are born with birth defects</p> <p>60% of all pesticides applied to crops induce tumours.</p> <p>500 different toxic chemicals have been found in Lake Michigan trout.</p> <p>8,000 pounds of toxic chemicals enter the air, water, and land of the Great Lakes basin each day; 16 million people depend on great lakes for drinking water.</p> <p>There is more than 1 pound of dioxin in Lake Ontario; 10 pounds will kill everything in the lake. A balanced diet of food grown in Ontario contains 66 times the acceptable daily intake level of dioxin.</p>
<p>- people using electricity for lights, big screen tvs, entertainment systems, computers, lawn mowers, leaf blowers, weed</p>	<p>-fishermen reeling in empty lines</p> <p>- canned fish shelves in grocery stores</p>	<p>acid rain</p> <p>Sulphur and nitrogen oxide causes acid rain, snow, and fog.</p>	<p>14,000 lakes in eastern Canada and 13 salmon rivers in N.S. are acid dead.</p> <p>80% lakes in Norway have</p>

<p>whackers</p> <ul style="list-style-type: none"> - power plant emissions - people driving cars, pick-ups, SUVs, mini-vans - people buying, industry making 	<p>empty</p> <ul style="list-style-type: none"> - sign at pizza place with “anchovies” crossed out - forests full of dead trees - grocery store fruit and vegetables aisle empty - people lining up for bottled water - buildings crumbling - train derailments -people wheezing with lung disease 	<p>The burning of fossil fuels to generate electricity is the largest single source of sulphur dioxide.</p> <p>Half of the nitrogen oxides come from motor vehicles; a third from power plants; and the rest from industrial operations.</p> <p>Nitrates from acid rain promote growth of algae that depletes oxygen supply and blocks sunlight. It thus kills fish and other aquatic life.</p> <p>Acid rain kills trees and makes forests prone to disease.</p> <p>Acid rain damages crops and leaches nutrients from the soil.</p> <p>Acid rain pollutes drinking water.</p> <p>Acid rain corrodes buildings and cars, erodes train tracks.</p> <p>Acid rain causes lung disease.</p>	<p>been declared technically dead or placed on the critical list.</p> <p>In the central alpine region of Switzerland, 43% of conifers dead or seriously damaged.</p> <p>In Poland, acid deposition is eroding iron railroad tracks, forcing trains to travel at only 40km/h Acid rain is the 3rd largest cause of lung disease.</p>
<ul style="list-style-type: none"> - industries making foam cushions, car seats, insulation 	<ul style="list-style-type: none"> - people with skin cancer - people with dark 	<p>thinning ozone layer</p> <p>CFCs are used to make foam, insulation, and</p>	<p>The lifetime of CFCs in the atmosphere is 100 years.</p> <p>At the current rate of CFC use,</p>

<ul style="list-style-type: none"> - people buying and using air conditioners in homes and cars - satellite receivers mounted on people's homes - people using cellphones - satellites orbiting Earth 	<p>glasses and white canes</p> <ul style="list-style-type: none"> - people lining up at the hospital - grocery shelves empty <p>[see list for global warming]</p>	<p>coolants. The destruction of the ozone means more ultraviolet rays get through, which means an increase in skin cancer, eye damage, and immune system diseases, as well as crop damage, depleted aquatic life, and an increase in the greenhouse effect.</p> <p>Satellite launching involves dumping millions of tons of rocket exhaust including ozone destroying nitrous oxide into the upper atmosphere.</p>	<p>we're destroying the ozone faster than it is created. An 85% cut was required to stabilize ozone concentrations.</p> <p>If CFCs are phased out by 1998, chlorine levels would not return to 1985 levels, still enough to damage the ozone, until 2090.</p> <p>Skin cancer has increased 83% in the past few years.</p>
<ul style="list-style-type: none"> - people unwrapping excessively packaged products, especially food products, and throwing the packaging in the garbage - garbage dumps overflowing - sewage being dumped directly into the ocean 	<ul style="list-style-type: none"> - roads and highways littered with garbage bags - garbage barges forever slowly moving around the ocean - garbage floating in space - line-ups at hospitals - people dying - funerals 	<p>garbage</p> <p>Waste disposal can cause pollution of groundwater.</p>	<p>The food industry accounts for 50-60% of all packaging wastes that end up in landfills.</p> <p>50% of all dump waste is packaging.</p> <p>By 2005, 75% of remaining landfill sites in US will be closed/full.</p> <p>Five of the top six chemicals generating the most hazardous wastes, ranked by the EPA, are integral to the plastics industry.</p> <p>Plastic is made from oil.</p> <p>76 billion pounds of plastic made per year in U.S.; one-third used for less than a year then discarded.</p> <p>The chemical industry producing resins for plastic packaging generates 11 billion</p>

			<p>pounds of hazardous waste per year.</p> <p>Five of the top six chemicals generating most hazardous waste are integral to plastics industry.</p> <p>The chemical and petrochemical industries contribute nearly 70% of hazardous wastes in industrialized countries.</p> <p>In the U.S., 2/3 of hazardous wastes is disposed on land, injection wells, pits, ponds, landfills, subject to leaks that can contaminate groundwater; 22 % discharged into sewers or directly into streams and rivers.</p> <p>80% Americans live near a hazardous waste site.</p> <p>Britain, whose toxic waste imports have multiplied 15X since 1985, uncharacteristically refused to accept two Canadian shiploads of PCBs that were headed for incineration in Wales.</p>
<p>- miscellaneous images of air, water, and land pollution (may include again automobile use, pesticide use, and exorbitant consumption)</p>	<p>- busy bees abundant, then scarce</p> <p>- grocery store fruit and vegetable aisle empty</p> <p>- grocery store canned goods aisle empty</p> <p>- sheep looking mangy</p> <p>- cotton fields decimated</p>	<p>loss of plant and animal species</p> <p>Habitat destruction by human activities is the primary cause of extinction and global loss of biological diversity.</p> <p>Wild plants and animals are vital to human survival, producing</p>	<p>One species becomes extinct each day.</p> <p>At the present rate, half of all species will be gone in 50 years.</p>

	<ul style="list-style-type: none"> - clothing stores empty - sick people - ill-clothed people - museums display huge of extinct species 	<p>foods, medicines, and essential raw materials, pest and flood control, maintenance of soil productivity, and degradation of waste.</p>	
<ul style="list-style-type: none"> - headlines showing China and Canada developing nuclear power plants - cities lit up overnight - sports stadium at night lit up - headlines indicating governmental decision to exempt nuclear power plants from obtaining insurance in case of accident 	<ul style="list-style-type: none"> - line ups at hospital - line-ups at fertility clinics - babies with birth defects - classrooms full of learning disabled students 	<p>nuclear waste/accidents</p>	<p>Radiation causes cancer, leukemia, sterility, thyroid disorders, miscarriages, and birth defects.</p> <p>Low level radiation causes in offspring mild allergies, susceptibility to pneumonia and viral infections, asthma, physical handicaps, blindness, mental retardation, cancers, and learning disorders.</p> <p>Half of Canada's electricity comes from nuclear plants.</p> <p>China is building 5 nuclear power plants, as of 2009.</p> <p>The world's navies have experienced accidents that have left at least 50 nuclear warheads and 9 nuclear reactors on the ocean floor.</p> <p>The reactor safety head of International Atomic Energy Agency established in 1987 says that there could be a major reactor accident in the world every 2.5-5 yrs.</p> <p>Canada's nuclear reactors have produced enough radioactive</p>

			<p>poison to contaminate all of Earth's lakes and rivers twice over.</p> <p>Toronto skydome electricity equal to 25,000 houses</p>
<p>any and all of the above</p>	<ul style="list-style-type: none"> - masses of hungry, ill-dressed, dirty, sick environmental refugees seeking entry to luckier countries - people fighting over a bottle of water - people fighting over a chunk of wood - cities dark at night - people staying indoors at night - injured people in the streets unattended to - headlines re wars all over the globe 	<p>Entire regions will have no arable land or water for food, no water for drinking or washing, no raw materials for clothing, and nothing to trade.</p> <p>(Oh, but they will have guns. Many and big guns.)</p>	<p>Wars have already been fought over fish (Britain-Iceland), oil (U.S.-Iran-Iraq), water (Arab-Israeli), land (El Salvador-Honduras)...</p>