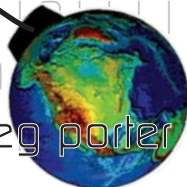


soft landing™



greg porter



*"A new world is taking shape at the end of the millennium that has two possible futures. If current trends continue we will have a world divided by immense inequality, with the poorest regions falling further behind. Our children will face a world of environmental collapse, international resentment, insecurity and uncontrolled international crime. Vast swathes of humanity will be excluded from great wealth created by a global economy."*

*"It is worth reflecting on what future generations will think when they look back. Will they see us as the first generation to build firm foundations for international peace and to rid the planet of the scourges of absolute poverty and avoidable disease? Or will they see a generation hell-bent on squandering every natural resource in a quest for material happiness and at the cost of the great majority of humanity? Will they feel pride or shame at what their fathers and mothers have done to the world they inhabit?"*

*Oxfam report, 1999CE*

## soft landing™ v1.0

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to Cathy DeMolt, for always being there.

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# start•

**soft landing** is a game about hope and pragmatism, policy and belief, hard choices and dire consequences. *And winning, of course.* Each player takes the part of a national leader, with the power to make all the important decisions needed to stay in power, keep their citizens happy and healthy, and ensure a better future for all. But...

There may not enough resources in the game for everyone, or they are unevenly distributed so that nations have to trade to get what they need. Will you share what you have and make even use of the open markets, or manipulate it for short-term gains? Will you contribute towards a brighter future, knowing other nations simply plan to take advantage of your investment? And will you find that many of your choices are already made for you, the expectations and demands of your populace constraining your ability to implement vitally needed change?

Victory in **soft landing** comes from having the highest point total one turn after one of the end-game triggers happens. These are various man-made Catastrophes that send the world into a downward spiral, or the development of New Era tech that pushes humanity into (or at least towards) a new age of prosperity. These points come from the sum of your nation's attributes and any improvements, plus any points gained from investments made. Of course, you can also lose points from natural and man-made disasters, or the political machinations of the other players.

**soft landing** is not quite a board game, not quite a way to tell a story and not quite role-playing. Your stats are that of a nation, not a character, but the way you play that nation can represent your own personal beliefs and your desire to reshape the world through implementing them. You are taking on a role, negotiating, bluffing, intimidating, making the most of limited resources for the good of your people, and maybe even the world as a whole. The game can end with the dawn of a new era, or be a sad tale of a downward spiral into barbarism.

Your job is to make sure *your* nation, *your* people and *your* ideals are the ones best prepared in either case.

## the sidebars

Most of the pages will have marginal notes. Some may be a bit cynical▼, while others are simply informative▲.

*So, let's get started.*

▲ **Winning soft landing** is about managing your resources, some cooperation, some competition, a little diplomacy, a dash of guile, and maybe a wee bit of extortion here or there. You can work constructively, work to tear down what others have built, or maybe both. There is something in it for everyone.

▼ You can look at **soft landing** with whatever slant you want. You can feel you have validated your beliefs if you use them and win, or say the game is propaganda if you apply your ideals and lose. You're wrong in either case. *It's just a game.* While having fun is the object (and winning is nice, too), the choices you make to try to reach that goal and the reasons you made those choices are what you should be thinking about.

## basics••

Almost everything in **soft landing** is based on skill. There are some elements of chance, but they affect all players in the same way, can be planned for and to some extent, manipulated for your gain. *Much like real life.*

▲ **soft landing** is mostly about you trying to get ahead of everyone else, but like all good economic and resource manipulation games, there are also ways to screw over the other players, through alliances, market manipulation, or actions that will slow you down a little, but slow down someone else quite a bit more.

And this becomes a matter of pragmatism and diplomacy. If you are in a position to slow down the leader in a four-player game, this means that the two *other* players can take advantage of your action better than you can. So, you should be looking for an angle to get something from those other players to offset your costs...

**soft landing** does not play for a set number of turns. Rather, play continues until one of the end-game triggers happens, after which one full turn is played for people to implement last-second plans for victory. Each of these end-game triggers is a ticking clock (or time bomb). Developing nations may overindustrialize, trying to build up to developed nation standards and levels of production, but pollute the environment in the process. Developed nations might overuse their resources, sparking one or more shortages. Unsound fiscal or trade policy might collapse a nation's economy, cascading into a global depression. Political tensions can lead to war, or overpopulation or inadequate health care could increase the chance of a pandemic. On the bright side, another game clock is the development of "New Era technology", which is undefined, but is capable of easing the other stresses on the system and maybe ushering in a new age of prosperity, or at the very least, a respite from the pressures that try to throw everything else out of balance.

In **soft landing**, all of these things are actions that players can take. Which ones they take will depend on how they intend to win, which to a large degree depends on the nation they are playing. Actions can result in short term gain at the expense of long term potential, and vice versa. Players can work together, be loners or form alliances of need or convenience.

So, to get ready for play, scrounge up about a dozen dice or tokens of the same color per player. For markers, you can print off and cut out the ones included in the game, use those from some other game you might have, or in a pinch use colored paper clips or thumbtacks or loose change. The important thing is that each player has some markers that are identifiable as belonging to *only* that player.

As a matter of game terminology, when the rules say something like "add a token", it can also mean "increment a die by one". So, if you are using dice instead of tokens or other markers, you simply change the die face to represent the new number. If you are reading through the rules for the first time, having the full size nation sheets already printed will make things easier to see.

## Nations

Each player will control a "nation". Each nation has five attributes and three possible abilities that they can utilize. Grab one of the nation cards and look at it. Red circles tend to indicate that you consume a lot or do not produce much, green indicates a general surplus of capacity and yellow is somewhere in between. The color of the icons below is just for ease of use and has no game effect. National attributes are below:



### Reserves

This represents your nation's ability and will to set aside strategic reserves for emergency use, "emergency" being defined as "what is in your nation's best interest at the time".



### Lifestyle

This is a combination of your population and your standard of living. A large country with a low standard of living can rate the same as a smaller country with a high standard of living. Nations that are more able to produce all the needs of their people tend to have better numbers than those which rely heavily on imports.



### Tech

Your technological base. Not necessarily what you have, but what you can make. The stuff your people would be able to buy even if your nation had absolutely zero imports. Nations with high-tech exports have better numbers than those who do not.



### Industry

Your nation's industrial base. While your Tech represents the efficiency of what you can make, your Industry represents how much of it you can make.



### Resources

Resources. This covers the potential energy, construction and food resources you have access to. Mines, wells, farms, forests and so on. The more a nation exports, the better its numbers will be.

### The numbers

The numbers in the yellow and red circles represent your chance of getting that item each round of play. The larger the range of numbers in a circle, the better.

▼ Nations in **soft landing** are *not* created equal. Some have a clear advantage compared to others. To balance this, the lesser nations start off with more VP than more developed nations. These extra VP let lesser nations get away with more and it is sometimes in the best interest of the more developed nations to pay the cost of mitigating the damage.

▲ The way a nation's starting Victory Points are determined is that each nation has a total number of tokens it would get for the set of production rolls from 1 through 6. Subtract this from 25 and add +1 for each red circle, each Population stress icon, and each stress icon past the seventh one on the nation, and that is its starting VP.

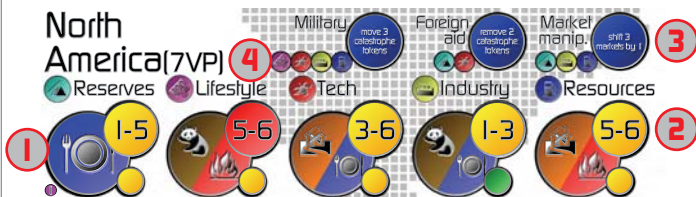
▲ Counting all parts of production, nations get from 1-6 tokens per turn, with national averages from a low of 2.2 (India) per turn to a high of 4.3 (European Union). This difference is why India starts with 13VP more than the European Union...

▲ The symbols you will need to remember:





When an icon is split like this, it will count as *both* of the items, so this would be a health stress *and* a political stress. If you have a choice between the two stresses, you choose the one on the left.

Here's a sample Nation:



Now, that looks pretty cluttered, but the colors and symbols are easy to figure out. The important things are:

1. Each attribute has a symbol or symbols in it, reflecting the type of stress that nation puts on the global system if you do not have a sufficient supply. *These circles never hold tokens.*

**Example:** If North America does meet its Lifestyle needs, it adds environmental  and political  stress to the system.

2. Each attribute has two rows of small circles, an upper row with numbers (red or yellow), and a lower row (yellow or green). The upper row represents potential **production**, and the lower row indicates **stockpiles**. In the production step of each round, a six-sided die is rolled, and everyone gets to put a marker on any *empty* upper row circle where that number was rolled.

**Example:** If the roll at the start of the round was “4”, then North America would place a marker in the Reserves, Tech and Industry circles that had numbers in them (since 4 is in the range for those circles and they are currently empty).

The color-coding of the circles has a special function which we will get into later. **These small circles (upper and lower) never hold more than one token each.**

3. Each nation has three special abilities. If a nation has a token in the circle next to an ability, then that ability can be used. Once it is used, you remove the token and you have to pay to replace it. Shorthand for what the ability does is in the blue circle, but full details are in the rules and reference cards. **These blue circles never hold more than one token each.**
4. The “VP” is the starting point score that nation has. Keep track of these with coins or tokens on the Victory Point track for whatever nation you end up with. *Whoever has the most VP when the game ends is the winner...* Every 4VP a nation gains will cause it to add a token to the Catastrophe Zone with the most tokens in it (player decides if tied).

## setup...

The first thing to decide, even before you setup the game, is how much of it you want or need to print. You probably want to print the rules and the Quick Reference. You *need* to print the large score track. Whether you need to print and cut out markers for each player depends on whether you have dice or other markers you can use.

Set up the score track in the center of the play area where all players can read and get to it, and give a Quick Reference card to anyone who needs one.

The basic game has “nations”, which are individual nations (Japan), groups that are on the same continent (Africa), part of an economic entity (NAFTA) or otherwise have their fortunes linked in some way. For instance, the North America “nation” is the United States, Canada and Mexico. Even though they have different international perspectives and governments, they are a single entity for game purposes. However, you are free to call your nation anything you want, so you can call the North America card “United States”, and it would be about the same, since the lion's share of the people and resources are in that chunk of territory.

The 11 nations or national groups are:

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**Group 1:** European Union(3VP), North America(7VP), Middle East(10VP)

**Group 2:** Japan(4VP), Russian Federation(9VP), South America(10VP)

**Group 3:** Africa(12VP), India(16VP), Pacific Rim(17VP)

**Group 4:** China(11VP), Eastern Europe(14VP)

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The nations are listed in order of their nation group and starting VP. Nations with fewer starting VP have better production rolls and can gain VP faster than less advantaged nations.

Nations are chosen by each player, with either the game owner choosing first and going clockwise, or order determined by random die roll. Nations have a tiny purple circle in the lower left of the card, with a number from 1 to 4. After the first nation choice, each other player must choose a nation with the next number, with 1 following 4.

**Example:** If you have three players and the first player chooses Japan, which has a “1” in the lower left corner, then the next player must choose one of the nations that has a “2” there, and the last player must choose a nation with a “3” there.

▲ The selection process insures the starting mix of nations has sufficient resources and variation to be interesting.

▼ Nation selection is the first step in strategy. The first player can effectively choose the subset of nations that each other player may choose from.

▲ As an optional rule, to make nation selection more interesting, you can choose *any* nation with a number that has not been selected yet, and if all numbers have been chosen at least once, you can choose any nation that has not had its number chosen twice.

▲ The national groups are designed to maximize the number of special national abilities in a three-player game.

▲ For less advantaged nations, the “global trade” or “outsourcing” abilities are the best to start play with. Since nations start with some of their yellow numbered circles filled, having “outsourcing” means that no matter what the production die roll is, you *will* be able to fill your red numbered circles.

▲ One round is probably a number of years, perhaps the length of one democratically elected government or a treaty or trade pact.

▲ The goal of the *game* is to have the most Victory Points after the game end condition is reached, but the goal of your *turn* is to get markers on as many of your nation's red and yellow *numbered* circles as possible. In each player's step 6 (Stress), they are penalized for any uncovered circles. The trick is, to gain Victory Points (or keep from losing them), you need to *remove* tokens from the circles, so there is a constant balancing act, complicated by the fact that the other players are directly or indirectly sabotaging you with *their* actions.

Once you have a nation, you put a token on each green circle (if any), then put a token on any one blue circle. Then put tokens on the *numbered* yellow circles of your choice until there are a total of 4 tokens on the card. We recommend putting your tokens on the yellow circles with the smallest range of numbers, if you have a choice.

**Example:** If playing Japan, you start the game with a token on the green circles, one of



the blue circles and one of the three yellow numbered circles. Since Tech and Industry have a smaller range of numbers than Reserves, Tech or Industry would be a better spot for the token than Reserves.

Once everyone has their nation set up, put their initial score (the VP listed on their nation card) on the VP track, put markers on the Free and Black Market with each available item in the Free Market and Black Market at a level of 1, and put tokens equal to half the number of players, rounding up, into the **Outsourcing, Global Trade, Military-Industrial, Foreign Aid** and **Market Manipulation** circles on the left side of the turn track. The **UN relief, World Bank** and **Perfect Science** circles are optional rules you may want to try later on.

## sequence of play....

**soft landing** is played in “rounds”, each round being complete when each player has done their “turn” and any catastrophes have resolved. The sequence of play each round is done in the numerical order below.

### Sequence of play

These steps are common to all players:

1. Begin the round
2. Reset nations
3. Production

Then, each player does all of these before passing to next player:

4. Use special abilities
5. Trade
6. Stress
7. Investment

Then, this step is common to all players:

8. Catastrophes

Then the round is over and you repeat the process.



## 1. Begin the round

The player with the *lowest* score goes first and play proceeds in order of score. If there is a tie score, the tied player who acted later in the previous round acts earlier on this one. Put the individual markers on the turn order track. As each player finishes their step 7 actions, they move their marker to the “done” spot. When all players are done, you do step 8 and then a new round begins.

## 2. Reset nations

All empty green circles have tokens placed in them, all red circles with tokens in them have their tokens removed, and all yellow and blue circles remain as they are. The player with the lowest score puts tokens equal to half the number of players (round down) into their choice of the **Military-Industrial**, **Global Trade**, **Outsourcing**, **Foreign Aid** and **Market Manipulation** circles. These circles may accumulate no more tokens than the number of players, and tokens must be placed if possible.

## 3. Production

The first player rolls a six-sided die. Any yellow or red *numbered* circle that is *empty* and has numbers matching this roll will get a token (e.g. a roll of 5 means all empty circles with “2-6”, “3-6” or “4-5” will get a token, while those with “2-4” do not). No nation has a roll where they get nothing, but rolls of “1” and “6” are always poor, and rolls of “4” or “5” are usually the best.

These are the starting Round actions. After this, players take their individual turns, starting with the first player and going in order of score. That is, *each* player completes steps 4, 5, 6 and 7 before play passes to the next player.

## 4. Use special abilities


If you have a token in one or more of the blue circles at the top of your nation, you can use them at this point in *your* part of the turn. Using special abilities may allow you to gain VP. If the circle on the turn track for that ability has tokens in it, you gain VP equal to the number of tokens, then you remove a token from that circle.

**Military Industrial Complex:** You may remove a Military token to move *up to* three different color tokens from one Catastrophe Zone to another. The tokens do not have to come from or go to the same zone, but they must be of *different* colors, and you cannot move tokens in or out of the New Era Tech zone.

**Global Trade Pact:** You may remove a Global Trade token to add a token to *up to* two empty yellow *numbered* circles on your nation.

▲ A “turn” is when it is a particular player’s chance to act, which happens at a specific time in a “round”, and is broken into several “steps”. Don’t worry about this much, the definitions are just here in case you have questions about who can do what, when.

▲ Since the availability and price of items on the Markets are very dependent on what other players have done that round, going first gives you the best chance to get what you want, or manipulate markets to the detriment of the other players.

▲ If your score crosses a  threshold due to gaining VP from a special nation ability, you must add one of your tokens to the Catastrophe Zone with the most tokens in it (you decide if tied). You do this *before* you use the special ability.

▲ The default stresses each nation generates are extremely abstract, but based as much as possible on current geopolitics, resources and consumption. So, it is no surprise that the first two stresses for the Middle East are the “political” or “population” stressor (which exacerbates whichever global condition is currently most stressed), or that Africa has “political” and “health” as its first two stressors.

▲ Stressors are things contributing to *global* destabilization. For instance, industrial nations exporting toxic waste to a less advantaged nation. The industrial nation suffers no *direct* ill effect from its waste, but is still adding to a *global* problem.

▲ An idiosyncrasy of the markets is that even if a commodity has a price of zero, you can still *buy* something with it. On the market shown at right, you cannot sell Resources (and drive Resource prices down), but you *can* use Resources to buy a Tech (and drive Tech prices up).

**Outsourcing:** You may remove an Outsourcing token to add a token to *up to* two empty red numbered circles on your nation (note that all red circles are numbered in the basic game).

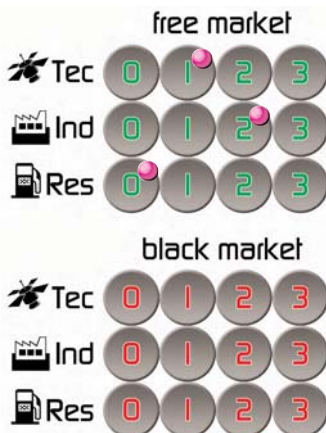
**Foreign Aid:** You may remove a Foreign Aid token to remove one of your color tokens from one Catastrophe Zone, but you *must* also remove one of someone else’s tokens from one Catastrophe Zone (these can be from different zones). *Gain any VP for using this ability before removing tokens from Catastrophe Zones.*

**Market Manipulation:** You may remove a Market Manipulation token to shift up to three items on the commodity markets by one point each. *Do not move any price more than once.*

## 5. Trade

Trade involves one or two actions.

First, you *may* freely shift any attribute tokens on your nation from the larger numbered circle to the smaller one for that attribute, or vice versa. This is moving stuff from production into stockpiles, or stockpiles into production. This is only done *within* each attribute (e.g. you cannot shift from Reserves to Lifestyle).



Second, you *may* use the Free Market or Black Market (not both).

**If you are buying from the market,** you spend between zero and three tokens *of any type* on your nation to get exactly one token of either Tech, Industry or Resources to add to your nation, in either the numbered circle *or* the stockpile for that attribute. **If you sell to the market,** you spend exactly one token of Tech, Industry or Resources from the numbered circle or the stockpile to get zero to three tokens *of any other type* to add to your nation. *Let’s explain:*

**Buying:** Look at the current value of the commodities on either the Free Market or Black Market. You must spend that number of *any type of tokens* off your nation to buy one token of that attribute, and then you move the cost for that attribute up by 1. It is very inefficient to do so, but you *may* spend tokens from blue circles to buy from the Market. What you use to buy an item with does *not* affect the market (i.e. using Industry and Tech to buy Resources does *not* adjust the Market’s supply of Industry or Tech). *Only the price of what you buy goes up.*

**Example:** If the Free Market has Tech at a cost of 1, you could remove one token from anywhere on your nation to buy one Tech token, which you would put on any empty Tech circle on your nation, and then move the Free Market cost for Tech up to 2. If the Free Market has Industry at a cost of 2, it would take two tokens from anywhere on your nation to buy one Industry token, and then you would move the Free Market cost for Industry up to 3. And if the Free Market cost for Resources was zero, you could buy a Resources token for *free* and then move the Free Market cost for Resources up to 1.

**Selling:** Look at the current value of the commodities on either the Free Market or Black Market. You must sell one token off that national attribute or its stockpile to get that many tokens, and you get to put them on any attributes or attribute stockpiles you want, *except the one you just sold*. You then decrease the cost of that item in the market by 1. *Only the price of what you sell goes down.*

**Example:** If the Free Market has Tech at a cost of 1, you could sell one of your Tech to the Market and get 1 token of any type (except Tech). This would drop the Market cost for Tech to zero. This would mean no one could *sell* Tech on the Free Market, since they would get zero return for it. If the Free Market has Industry at a cost of 2, you could sell one of your Industry to the market and get 2 tokens of any type (except Industry), and put them on any empty attribute circles or stockpiles on your nation. You then decrease the Market cost for Industry from 2 to 1.

Basically, when you buy something from the Market, the buy/sell price for everyone else goes up. When you sell, the buy/sell price for everyone else goes down. The only commodity whose price is affected is the one you are buying or selling.

The difference between the Free Market and the Black Market is that any use of the Black Market by a player means that one of their tokens goes into the Economic or Political Catastrophe Zone (that player's choice). The Black Market does not necessarily have better prices, but the penalty for using it means that it might be available when the Free Market is too expensive.

Remember that you only get to make *one* trade during your turn, you may buy *or* sell (not both), and may use either the Free Market or the Black Market.

▲ If you have thought about the way the rules work, it is very unlikely a nation can be stress-free on a continual basis. Even if you have temporary fixes like global trade pacts or outsourcing, they cannot be maintained if you get a few bad production rolls.

So, this does put the game on a clock, and players have to plan how to make a game end in their favor. Using a constructive or destructive strategy is a matter of individual choice.

▲ **You cannot buy Reserves or Lifestyle on the Market.** You have to *sell* Industry, Tech or Resources to get them during the Trade step. Or, you could use Outsourcing or Global Trade to fill those yellow or red circles during step 4.

▲ Even if the “buy” price of a Black Market item is zero, you still generate a Political or Economic stress token if you get that item from the Black Market.

▼ Some nations can for all practical purposes extort assistance from others. A major Health Catastrophe causes nations to lose Tech and Foreign Aid tokens. Africa does not have Foreign Aid as an ability and is unlikely to leave a token on its Tech, so such a catastrophe is of no concern (except for the VP it would lose). So, Africa can contribute to a Health Catastrophe and have a good chance that when other nations use Foreign Aid to remove their own Catastrophe tokens, they will *also* remove one of Africa's Health Catastrophe tokens.

▲ Remember that stress is caused by not having tokens on the *numbered* circles. Having tokens in the small stockpile circles does not count.

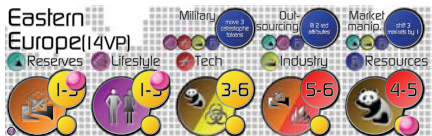
▲ As a strategy note, it is difficult to get the game to end through New Era Tech if only one nation contributes to it. You really need two or more players competing for it to accumulate tokens fast enough.

## 6. Stress

After each player has done their trading (if any), they check their nation sheet. Any attribute whose red or yellow *numbered* circles (the upper ones) are not covered can contribute to global stress. Starting on the *left* side of their nation (Reserves), each Attribute is checked in order, and tokens are added to Catastrophe Zones until the Attributes are done, or three tokens have been added to Catastrophe Zones, whichever comes first. If the third token added to a Catastrophe Zone would come from an attribute with two icons in it, the player must choose the top one first.

**Example:** After trading, Eastern Europe has tokens on Reserves and Lifestyle, with Tech and

Industry empty and a token in the stockpile for Resources. Check from left to right: Reserves and Lifestyle add no stress, Tech stress adds one token to the Environmental *and* Health Catastrophe Zones, then Industry stress adds one token to the Economic Catastrophe Zone. This is three tokens, so no other stress checking is needed. *Note that Eastern Europe deliberately left Resources uncovered, knowing it would not add any extra stress to do so.*



Population stress is a special case. There is no “Population Catastrophe Zone”. Instead, if this is one of the stress items for your nation, you must add a token to whichever Catastrophe Zone has the *most* tokens in it at the time (not the most of *your* tokens, the most tokens in total). If zones are tied for the most tokens, you may choose which to add to.

## 7. Investment

Now, each player may spend some or all of the tokens on their nation. You simply remove tokens from your nation card as required to pay the cost of a particular purchase.

**New Era Tech:** Any nation may invest in New Era Tech. You may spend one (and only one) Tech token and put one of your color tokens into the New Era Tech zone. The *first* player to invest in New Era Tech in a round may remove one token of any color from any Catastrophe Zone *or* the New Era Tech zone. So, the first player in a round to buy New Era Tech can add to the global tech pool, or say that their tech supercedes someone else's and renders it irrelevant. Note that since the player with the lowest score has the first shot at this, and the more developed nations start with lower scores, the more developed nations are more likely to get the most benefits from investing in New Era Tech.

**Victory Points:** Any nation may buy VP and may use any type of tokens to pay for them. Cost is based on your *current* score and is the number in the small circle at your spot on the VP track. You may buy more than 1VP, but you buy them one at a time and the cost may change based on your current score. If your score lands on a 🍒 icon when you gain VP, you must add one of your tokens to the Catastrophe Zone with the most tokens (you choose if tied).

**Military Industrial Complex:** If your nation has an empty blue “Military” circle, you may buy this. This has a cost of one Tech, one Lifestyle, one Industry and one Resource token, and lets you put a token in the blue “Military” circle. You may remove that token in step 4 to move *up to* three different color tokens from one Catastrophe Zone to another. Tokens do not have to go to or come from the same zone, but they must be *different* colors, and you cannot move tokens in or out of the New Era Tech zone.

**Global Trade Pact:** If your nation has an empty blue “Global Trade” circle, you may buy this. This has a cost of one Industry, one Tech, and one Lifestyle, and lets you put a token in the blue “Global Trade” circle. You may remove that token in step 4 to add a token *up to* two empty yellow *numbered* circles on your nation.

**Outsourcing:** If your nation has an empty blue “Outsourcing” circle, you may buy this. This has a cost of one Reserves, one Lifestyle and one Resource, and lets you put a token in the blue “Outsourcing” circle. You may remove that token in step 4 to add a token *up to* two empty red *numbered* circles on your nation.

**Market Manipulation:** If your nation has an empty blue “Market manipulation” circle, you may buy this. This has a cost of one Reserves, one Industry and one Resource, and lets you put a token in the blue “Market manipulation” circle. You may remove that token in step 4 to add a token to shift the value of *up to* three separate commodities by 1 point each.

**Foreign Aid:** If your nation has an empty blue “Foreign Aid” circle, you may buy this. This has a cost of one Reserves and one Tech, and lets you put a token in the blue “Foreign Aid” circle. You may remove that token in step 4 to remove one of your color tokens from one Catastrophe Zone, *and* you remove one of someone else’s tokens from one Catastrophe Zone (may be different zones).

This ends the individual player turns. Remember to move your turn order marker to “done”. The Catastrophe step happens to all players at once, and when that step is done, the round is over.

▲ The longer a game runs, the more likely the more advantaged nations will win, since they are almost certain to have the tokens to gain VP each turn. Less advantaged nations can win by forcing Catastrophes or New Era Tech as fast as possible. The more advantaged nations can offset this with Foreign Aid or their superior ability to invest Tech. The nations in between have to balance one versus the other. There are a lot of possible strategies to try out.

▼ Investing in a Military-Industrial Complex never makes things better, it just rearranges the blame. This is an important way to both temporarily avert a major Catastrophe (or just blame someone else for it when it happens).

▲ New Era tech is a race. If it is realized, whoever gets the credit can benefit immensely, but the other contributors get *nothing*.

▲ Just so you know, the chance of a *major* Catastrophe is below, given the number of tokens in a particular zone. This is also the chance of triggering an endgame condition for that many tokens in the New Era Tech zone.

Tokens	Chance
2	-
3	< 1%
4	2%
5	5%
6	9%
7	16%
8	25%
9	38%
10	50%
11	63%
12	75%
13	84%
14	91%
15	95%

**Example:** If there are 7 tokens in the New Era Tech zone, there will be a 16% chance that the endgame will be triggered.

The chance of a *minor* Catastrophe is below, given the number of tokens in a particular zone.

Tokens	Chance
1	< 1%
2	4%
3	13%
4	31%
5	59%
6	100%

### 8. Catastrophes

Everything that players can do in a round is now done. *This* step covers the fallout from these actions and is a common step to all players. You resolve actions in this step in the listed order, but note that Major Catastrophes might trigger more minor (or even major) Catastrophes. This step is not complete until any and all cascaded effects fully resolve.

There are two types of Catastrophes, minor and major. Whether or not one happens is a random roll. People do not know exactly when a crisis will occur, only that they are making one more likely by their actions. Random chance could cause a major disaster early in the game. To determine what happens, roll three six-sided dice. You need to keep track of the highest die and the total of the dice. The result you get will apply to *all* the Catastrophe Zones.

**Example:** If the three dice rolled came up “3”, “4”, “5”, the total for the three dice add up to “12” and the high die is “5”.

#### Minor Catastrophe:

If the highest die rolled is equal or less than the number of tokens in a particular Catastrophe zone, that zone has a minor Catastrophe.

#### Major Catastrophe:

If the sum of the dice rolled is equal or less than the number of tokens in a particular Catastrophe zone, that zone has a Major Catastrophe. If two or more Major Catastrophes happen in a game, this triggers an end game state.

#### New Era Realization:

If, *after all Catastrophes have resolved*, the sum of the dice rolled is still equal or less than the number of tokens in the New Era Tech zone, there is a major tech breakthrough that triggers an end game state. Note that New Era Tech realization is checked *after* Catastrophes. A Catastrophe that removes New Era Tech tokens might prevent New Era Tech from being realized.

Any given zone can have a major *or* a minor Catastrophe, not both, and a major Catastrophe result trumps a minor Catastrophe result. No zone can have multiple Catastrophes on the same turn. If there are multiple Catastrophes of different types, *resolve the major Catastrophes first*, in order: **Health**, **Economic**, **Resource**, **Political**, **Environment**, then see if *other* major Catastrophes are triggered, then check the token totals again to see if there are any minor Catastrophes in zones that did not have major Catastrophes.

**Example:** If the dice result indicated a major Health Catastrophe *and* a minor Economic Catastrophe, you resolve the major Health Catastrophe first. The effects of the Health Catastrophe might change the minor Economic Catastrophe to a major one.

### Minor Catastrophe:

When a minor Catastrophe occurs the player or players with the most tokens in that Catastrophe zone each lose 1 VP and remove one of their tokens from the New Era Tech zone (if they have any). Minor Catastrophes all have the same game effect, regardless of the type. After a minor Catastrophe, any player who lost VP because of it may remove one of their tokens from that Zone. The minor disaster reduces a little stress from the system, and the nations most affected hopefully learn a little from their mistakes.

### Major Catastrophe:

When a *major* Catastrophe occurs the player or players with the most tokens in that Catastrophe zone each lose 3VP and remove two of their tokens from the New Era Tech zone (if they have any). The player or players who lost the VP must each add 1 token of their color to another Catastrophe Zone, which will depend on which type of Catastrophe was triggered.

Then, immediately apply the other effects of that Catastrophe type. Catastrophes can have effects that trigger other major or minor Catastrophes on the same turn. After each major Catastrophe resolves, remove *all* tokens from that Catastrophe zone.

**Example:** If a major Health Catastrophe happens, you remove all tokens from that zone after the effects happen. If somehow enough tokens went into that zone afterwards to cause a minor Catastrophe, you would just ignore it since a more severe Catastrophe had already happened.

When a major Catastrophe happens, it will add tokens to another Catastrophe Zone, and if this raises the number of tokens to the minor Catastrophe threshold for that Zone, then another minor Catastrophe may happen. It might also change what would have been a minor Catastrophe to a major one, in which case the major Catastrophe result happens instead of the minor one.

▲ For chance of a minor Catastrophe, "6" is the magic number. If a zone ever has 6 or more tokens in it, you are guaranteed to have at least a minor Catastrophe in that zone.

**Example:** Six or more tokens in a zone automatically means the highest die rolled is equal or less than "6".

▲ Increases in **Political Catastrophe** chance come from people's expectations not being met, blaming other nations for it (*they* jacked up the price of oil, *they* are exploiting our workers, *they* are corrupting our values, etc.).

▲ Increases in **Economic Catastrophe** chance represent things like tariffs or protectionism, embargoes, cartels or problems associated with moving jobs from one country to some other with lower labor costs.

▲ You *do not* add tokens to Catastrophe Zones if crossing a VP stress level when your score goes *down*.

▼ A "minor" Catastrophe is something killing or adversely affecting at least a hundred thousand people. A major Catastrophe is an international disaster that affects *millions*. Some major Catastrophes in game terms would be the influenza epidemic of 1918 (Health Catastrophe), the Great Depression (Economic Catastrophe) and World Wars 1 and 2 (Political Catastrophe).

▲ Catastrophes are generally very, very bad. Some are worse than others, and most of them make it harder to keep your nation running smoothly, and thus increase the chance of some other sort of Catastrophe further down the line.

▼ One of your greatest joys as a *destructive* player will be causing multiple *other* people to be blamed for a major Catastrophe, and having the results of that trigger *another* Catastrophe.

The full effects of the Catastrophes are as follows:



**Health Catastrophe:** Most likely this is a global pandemic. This could be a slow problem like HIV, or something faster like influenza. Poor living standards and health care plus a high population have created a reservoir for some sort of pathogen, which then spreads across the globe, overwhelming health care and causing disruption in other parts of the global machine.

In the event of a major Health Catastrophe the major contributors lose VP as described earlier, and the nation or nations who contributed the most to the Catastrophe add 1 token each to the **Economic Catastrophe** Zone. In addition, *any* nation with tokens on Foreign Aid or Tech or a Tech stockpile removes them.



**Economic Catastrophe:** An economic catastrophe deals with trade embargoes, exchange rates, imbalances of trade, incompatible labor practices or standards, banking defaults, cartels and monopolies all combining to bring about or exacerbate a global economic downturn.

If there is a major Economic Catastrophe the major contributors lose VP as described earlier, and the nation or nations who contributed the most to it add 1 token each to the **Resource Catastrophe** Zone. In addition, *any* nation with tokens on Market Manipulation or Industry or a Industry stockpile removes them.



**Resource Catastrophe:** This could easily be the long-term depletion of non-renewable resources, but could also be a severe shortage of some other necessary resource, such as a famine.

If there is a major Resource Catastrophe the major contributors lose VP as described earlier, and the nation or nations who contributed the most to it add 1 token each to the **Political Catastrophe** Zone. In addition, any nation with tokens on Military or Resources or a Resources stockpile removes them.





**Political Catastrophe:** A Political Catastrophe is probably a major war, or something of equal disruptive power, like a number of minor wars going on simultaneously. Nations that cannot keep their populations happy may engage in wars as a political tool or resource-gathering measure.

If there is a major Political Catastrophe the major contributors lose VP as described earlier, and the nation or nations who contributed the most to it add 1 token each to the **Environmental Catastrophe** Zone. In addition, any nation with tokens on Outsourcing or Reserves or a Reserves stockpile removes them.



**Environmental Catastrophe:** The most obvious candidate for this is global warming, with increased flooding of low-lying coastal areas, increased hurricane damage, atypical floods, droughts, disruption of the Gulf Stream, pest species moving into areas normally too cold for them and so on.

If there is a major Environmental Catastrophe the major contributors lose VP as described earlier, and the nation or nations who contributed the most to it add 1 token each to the **Health Catastrophe** Zone. In addition, any nation with tokens on Global Trade or Lifestyle or Lifestyle stockpile removes them.

## Anarchy:

If, after Catastrophes (and possibly New Era Tech), a nation's VP would be reduced to *less than zero*, the nation's VP stays at zero, but that player must immediately lose *all* the tokens from their nation and that nation devolves into temporary anarchy. They do not get to use the Free Market or Black Market on the following turn (though they may move tokens from production to stockpiles), nor can they make any investments in step 7. The nation adds no tokens to Catastrophe zones for failing to provide necessary goods and services during step 6 (their people are *already* rioting in the streets). If the nation does not lose any VP to a major or minor Catastrophe on that turn, then they pull out of anarchy and can act normally on the following turn. If game circumstances make them lose VP due to another minor or major Catastrophe, then the state of anarchy continues. This *can* result in a player being effectively unable to act on the final turn of the game. Anarchy is very unlikely state, but it *can* happen.

▲ A major Catastrophe can make it difficult to reach the New Era tech, depending on the number of players and their nations. Even the minor Catastrophes have the potential to start a downward spiral into oblivion.

▼ Major Catastrophes may be inevitable. For some sets of nations or tactics, there is not sufficient ability to remove Catastrophe tokens to keep the system going. Not all games will (or can) have a happy ending. Plus, differing player styles and different combinations of nations mean that no two games will be the same.

▲ You do not have to agree with all of the national rankings and stressors. **soft landing** works regardless of the name on the card, and you can assign any name you want to a nation so that it matches the way you perceive its attributes and stressors.

▲ Some Catastrophes are going to be more likely than others, to some extent modified by the nations in play.

▲ This is also a reminder that if you have the Foreign Aid or Military ability, a little planning can save you some grief. In this example, the potential political catastrophe is fairly obvious. If the North America player had a Military, they could have used it earlier in the turn to move one of their (red) tokens out of the Environment zone and one of China's (blue) tokens into the Environment zone from the Political zone. This means that China would get the blame for the minor Environmental Catastrophe and loses IVP instead of North America losing it.

▼ A dirtier trick would be to move one North America and one China token from the Environment zone to the Political zone, and one Middle East token from the Political zone to the Environment zone. Work that one out for yourself.

**Catastrophe Example:** Three dice are rolled for Catastrophe chance. If the *highest* of those three dice is equal or less than the number of tokens in a particular Catastrophe zone, then there will be a minor Catastrophe in that zone. If the *total roll* is equal or less than the number of tokens in a particular Catastrophe zone, then there is a major Catastrophe in any zone that meets this criteria. In this case, we are guaranteed to have at least a minor Political Catastrophe, since there are 9 tokens there (more than any one die). For this four-player example, the roll of three dice comes up “2”, “4”, “2”. This means a major Political Catastrophe (since there are 9 tokens there and the total roll was 8) and no minor Catastrophes (yet, since none of the other zones have 4 or more tokens in them and the highest of the dice rolled was a “4”).



In case it is hard to see, the **Resource** Catastrophe zone has two North America tokens (red), the **Political** Catastrophe zone has one South America token (purple), three China tokens (blue) and five Middle East tokens (green), and the **Environment** Catastrophe zone has two North America tokens and one China token.

The major **Political** Catastrophe resolves. Middle East contributed the most (5 tokens) and loses 3VP and would lose 2 tokens from New Era Tech (if they had any). In addition, *all* nations lose all tokens they had on Outsourcing, Reserves and Reserves stock-piles. Then remove all tokens from the **Political** Catastrophe zone. Since Middle East contributed the most to the Catastrophe, they add one of their tokens to the **Environment** Catastrophe zone. This means there are now four tokens there, triggering a minor Catastrophe (the highest die rolled was “4”). North America has the most tokens in this zone, so they lose IVP and would lose 1 token from New Era Tech if they had any. North America then removes one of their tokens from this zone. Note that even though North America did not contribute at all to the **Political** Catastrophe, they still got hit by the fallout from it, losing IVP from something that wasn't even their fault!

## game end.....

There are three ways to trigger the endgame of **soft landing**. It is possible more than one can happen. *In each case, one more round is played.* The first condition is realization of New Era Tech. If, after Catastrophes, the total Catastrophe dice roll is equal or less than total investment in the New Era, this triggers the end game.

**Example:** If after all Catastrophes have resolved, there are six tokens in New Era Tech and the *total* of the Catastrophe dice is "6" or less, this triggers the end game.

Each player with tokens in New Era Tech rolls a six-sided die and adds their tokens in that zone to the result. Whoever has the high total gets VP equal to the tokens they have in the New Era Tech zone, and the other contributors get *nothing*. If there are ties, reroll until there is a winner. Remove all tokens from the New Era Tech zone. No one may invest in New Era Tech for the rest of the game.

If the end game is triggered by realization of New Era tech, there are special conditions. After the production die roll (step 3), each nation may add a token to any one of their *numbered* circles. Then, they may remove one of their color tokens from *one* Catastrophe zone, in turn order.

The second end game trigger is based on Catastrophes. If two or more major Catastrophes happen (including two occurrences of the same major Catastrophe), this also triggers the end game. If the end game is triggered by two major Catastrophes, there are special conditions. After the production die roll (step 3), each nation must remove a token from one of their *numbered* circles if possible.

The last end game trigger is if any player gets to 30VP. No special effects happen, but you play one more round after this happens. The maximum possible score is 30VP, so if you make it there, no one can beat you, but they can tie or try to drag you down. Remember, if any (or all) conditions are met, one more round is played after the one in which the end game trigger happened. VP can be gained and lost by all the normal means during this final round. At the end of this final round, whoever has the highest VP total is the winner, with ties broken by the number of tokens of any kind remaining on their nation. If another end game trigger happens on the final turn, the game still ends on that turn. This second end game trigger may adjust VP totals, however.

- ▲ If you somehow manage to realize New Era Tech on the last round of the game, you do get VP for it, but the game does *not* continue for another round.
- ▲ For the Catastrophes where one nation is heavily represented, it is clearly in the interest of that nation to do something about it, otherwise they will be the main culprit, losing the most VP as a result.
- ▼ Of course, "doing something about it" could just mean investing in a Military-Industrial Complex to shift the blame for the problem elsewhere...
- ▲ The Catastrophe example gives you a good idea of the interconnected nature of the global system. Your actions (or your inactions) can have effects that spread farther than your own sphere of interest or influence.
- ▲ Do not be lulled by low numbers of tokens in the various Zones. Many are the games that will end with a surprise low roll.

### ▲ Play tips:

#### 1. **Know the globe.**

Look at the starting mix of nations. This gives you an idea of where the stress points are going to be later on.

#### 2. **Don't be shy.**

If you have something you need to trade for, get it, even if you have to use the Black Market.

#### 3. **Do what you have to do.**

Winning *is* the object after all. If you can get others to pay to clean up *your* messes, then do it. If you can win just by shrewd trading, that works too.

#### 4. **Keep an eye on Catastrophes.**

The minor Catastrophe that costs everyone involved a New Era token and 1VP can be a setback to your plans. And the major Catastrophes are *definitely* bad.

#### 5. **Take advantage of going first.**

This means you have the lowest score, so use the advantage of going first to help yourself or hinder others.

#### 6. **Network.**

The first and last players are natural enemies, but also have the best synergy.

**Remember:** Your nation in **soft landing** is governed by you. What your personal philosophy is about your nation, nationalism in general, the environment, resources and so on is the way your nation goes. You can play strictly according to your philosophy and see how it works. Maybe you are willing to bend the rules a little, maybe you are willing to manipulate the market, depending on your perception of how it affects your nation, the world and the common good.

Just remember that if you don't win, it won't be your ethos that shapes the world of the future, it will be someone else's.

## strategies.....

The best way to try for victory is based partially on your fellow players and partially on your nation. Obviously, if you start with India and its 16VP, ending the game very quickly could be to your advantage, while if you are the European Union with 3VP, you need to keep the game going so you can accumulate more VP, and make sure nothing happens to drop you to zero VP or below.

Nations going first can profit more from using special abilities and gaining VP, and nations going last can also more easily invest in VP (because they have lower scores). If you choose your nation last and can pick one where no other players have a particular special ability, then you will have the VP for using that ability to yourself. Use your special abilities whenever it is profitable to do so. The VP available for using many abilities will run dry in a long game, so get them while you can.

Nations with good Tech numbers clearly have the advantage in New Era Research, but they are also most likely to need that Tech to go towards other possible investments. Being the first in a round to invest in New Era Tech can help you get rid of stress tokens, or it can sabotage someone else's New Era research.

Keep an eye on your place and everyone else's tokens in the Catastrophe zones. Manipulating the number and placement of the tokens there is often key to victory. Using a Military to shove three extra tokens into a particular Catastrophe Zone can throw a wrench in the works for the players affected.

The Markets are exceptionally important. Being able to mess with market prices can be used to help you and hurt other nations. For instance, if the player after you needs Tech and you can drive the price up, you may be able to keep them from getting it. Or, if you want New Era Tech to resolve, you can help them get it...

## optional rules.....

Once you figure out what you are doing, you may want to try one or more of the following optional rules. Options 2 and 4 may be useful if everyone is being culthroat and tokens are piling up in the Catastrophe zones too fast, like in a five- or six-player game.

### option 1: Two-player game

Like a lot of games of this type, **soft landing** does not play well with two players. To get around that, try the following. When choosing nations, the second player chooses two nations, just as if there were a third player, then chooses which of these nations is theirs and which nation is "shared". In any given round, the shared nation is played by the player who goes first. All decisions about use of special abilities, trade, etc. are handled by that player. The game end conditions are normal, but in the unlikely event that the shared nation has the highest score, the player in control of the shared nation on the final turn wins the game.

### option 2: UN relief fund

The game starts with a relief fund of three "disaster relief" tokens. The *last* player in a round is the current chair of the UN relief fund and can decide how it is used. Whenever a token would be put into or moved into a Catastrophe zone for any reason, the chair of the UN relief fund can spend a disaster relief token to remove that token, but they may *not* spend to remove their own tokens. Any nation with the ability of "Foreign Aid" may purchase a relief token at the cost of a Foreign Aid token to replenish one that has been used. Adding tokens to the UN relief fund in this way is worth 2VP for the player doing it *and* 1VP for the chair of the UN relief fund. The UN relief fund can have a maximum of three tokens on it (so players cannot add tokens to it until it goes down to two tokens).

### option 3: UN sanctions

If a player adds two or more tokens to a *single* Catastrophe Zone *during step 6*, any *other* player may call for a "sanctions" vote", for wanton pollution, human rights abuses, etc. Voting is done in turn order. Only one sanctions vote is allowed per round. All players except the target of the sanctions vote, and if a majority is in favor, sanctions pass. In turn order, each nation voting in favor then decides whether or not to fund the sanctions. Any nation voting in favor of sanctions may pay one token of any kind (a fund to monitor the situation). If *any* nation voting in favor of the sanctions pays a token, then sanctions are in effect for *this* round. *Otherwise it just ends up as another toothless UN resolution.* If sanctions go into effect, if there is a Catastrophe of any type in that zone this round, each nation who paid to fund the sanctions gains 1VP.

▲ This is actually a pretty cool way to do a two-player game, but it does mean the player with the lower score has to do twice the work (running two nations).

▼ This just gives players a way to profit from someone else's bad luck or irresponsibility.

▲ This option can remove up to 3 Catastrophe tokens and possibly stave off disaster long enough for New Era Tech to be realized.

▲ This option makes it less profitable for less developed nations to try to overload the Catastrophe zones, since not only will that player lose VP from being blamed for Catastrophes, but other players can be awarded VP for funding sanctions against that player.

▼ It's a subsidized loan. The World Bank never expects to get its money back.

▲ A World Bank loan really just gives a less advantaged nation an extra token or two of some kind to get it over a bad production roll.

▼ **soft landing** has no slant other than that which you put on it yourself. The author has his own biases, but they really just affect the perceived timescale of the game, *not* the final outcome.

That is, there just are not enough resources on Earth to support 7 billion people at the standard of living enjoyed by the most developed nations, at least not with the *current* technologies used by the most developed nations. The only real question is whether this causes us serious problems sooner...or later.

Do we run out of resources, stratify into haves and have-nots fighting over an ever-shrinking pie, or come up with a new way of doing things? *You decide...*

## option 4: World Bank

The World Bank starts with a stockpile of three tokens. Once per turn during Trade (step four), a player who has or is tied for the fewest tokens on the sum of Tech, Industry and Resources (which includes stockpiles) may apply for a loan of one or two tokens from the World Bank. All players except for the applicant vote, and if a majority is in favor of the loan, the player removes one or two tokens from the World Bank and places them on any empty red, yellow, or green circles on their nation (this includes stockpiles). The player who is granted the loan is supposed to pay it back during their Trade step in the *next* round (by removing one or two tokens from their nation and putting them on the World Bank). If they cannot or choose not to pay back the loan by the time it is due, they add one token to the **Economic Catastrophe** zone for each token they did not repay.

However, before it comes due, any other player who has not yet done their Trade step can pay off some or all of the balance in *their* Trade step. If they do, they get IVP per token they supply (basically, they are forgiving the loan and writing off the debt). Once the delinquent balance is paid, no other player can pay it off and get the benefits of it.

## option 5: Perfect science

*Before* you make each Catastrophe roll, assign one of the dice as a "predictor". Retain predictor dice from round to round and just roll the remainder (two dice, then one die, then none). This means the dice total will eventually become fixed. On any round with one or more minor Catastrophes, the *highest* predictor die is put back into the mix for later turns. If there is a major Catastrophe, all predictor dice are put back into the mix. *This changes strategy quite a bit.*

## footnote.....

Part of the irony of **soft landing** is that the sentiment expressed in the credits of the game is not fully achievable...ever. By some calculations, it would take three Earths to support the population of the world at a US standard of living, two Earths for an EU standard of living. And that is only if world population stays steady. The old saying is that "a rising tide lifts all boats". That is, rising standards of living to some extent helps everyone. *The problem is that there may simply not be enough water to float all the boats.*

**soft landing** gives the option of a "new era", some undefined tech or combination of tech that lets us do more with less and thus "float more boats". Whether or not it can be achieved, in either the game or the real world is presumably up to you.

# soft landing glossary.....

Below are some of the terms used in **soft landing** or which might come up in any discussion of the subject and nature of the game. Some items will have web links to sites holding supporting or opposing views on the subject.

**cartel:** A group of independent producers whose goal is to fix prices, to limit supply and competition. Private cartels are prohibited by antitrust laws in most countries; however, they continue to exist nationally and internationally. A single entity with a monopoly is not a cartel, though it may abuse its monopoly in other ways. Cartels are inherently unstable, as members can gain financial advantage by exceeding their production quotas or underselling other cartel members.

proponent site: [www.opec.org](http://www.opec.org)

opponent site: [www.freedomandprosperity.org](http://www.freedomandprosperity.org)

**clear cutting:** A logging operation in which all or nearly all trees in a selected area are harvested. The reasons for clearcutting can range from optimizing the regeneration of a forest to clearing land for other uses to taking every tree worth any money.

proponent site: [www.healthyforests.gov](http://www.healthyforests.gov)

opponent site: [www.ran.org](http://www.ran.org)

**embargo:** The prohibition of commerce and trade with a certain country, usually as punitive measure by a group of nations in protest of that nation's policies on a matter of importance to that group. Embargoes are often of limited effectiveness and often result in smuggling.

**global warming:** The observed or claimed increase in the average temperature of the Earth's atmosphere and oceans in recent decades. The prevailing scientific consensus is that most of the warming observed over the last 50 years is attributable to human activities, but this opinion is far from unanimous nor is it agreed that the effects of it are all detrimental.

proponent site: [www.ipcc.ch](http://www.ipcc.ch)

opponent site: [www.cei.org](http://www.cei.org)

**peak oil:** The Hubbert Peak theory posits that for any given area, from an individual oil field to the planet as a whole, the rate of oil production tends to follow a bell-shaped curve. Early in the curve (pre-peak), production increases due to addition of infrastructure. Late in the curve (post-peak), production declines due to resource depletion. Peak oil refers to the peak of the Earth's oil production, after which the rate of oil production will enter a terminal decline.

▼ This game brings up what is known as a "Prisoner's Dilemma". If all nations cooperate towards reaching the New Era, then that goal can be readily achieved, and this is good for everyone. But, only *one* nation reaps the VP benefits. And, nations that do *not* contribute can invest and possibly gain more VP than a nation that is trying for the New Era.

Plus, nations that do not contribute or add stress in an attempt to catch up, will hinder the developing of New Era tech, making it more likely that Catastrophes will overtake the world, making it even more difficult to achieve the New Era tech.

So, it would seem to be in the interest of the more advantaged nations to help less advantaged nations, encouraging them to act more responsibly. But this of course makes it easier for the less advantaged nations to improve themselves and increase *their* chance of winning.

▲ For reference, in terms of US\$, a per capita income as listed puts you in the listed percentage bracket on a global scale:

US\$500	top 80%
US\$1,000	top 45%
US\$2,000	top 18%
US\$5,000	top 15%
US\$10,000	top 13%
US\$20,000	top 11%
US\$50,000	top 1%

Or, put another way, half of the world's population gets by on about US\$2.50 per day. Much of the world's wealth is in the hands of a tiny percentage of the population. *So, should wealth be forcibly redistributed through taxation?* That's a matter of personal opinion, but consider that if you decided to redistribute the total net worth of every billionaire on Earth (all 2 trillion US\$ of it), it would add up to less than \$1 per day per person. Is raising the average daily income to US\$3.50 going to end global poverty? *Unlikely.* But, given their past track record, would government spending initiatives do any better? *Just as unlikely.*

Opinion is currently split between those who think we have already passed this peak, and those who feel we have not and that alternate sources will make up any shortfall. The theory is named after American geophysicist Marion King Hubbert.

proponent site: [www.peakoil.net](http://www.peakoil.net)

opponent site: [www.cera.com](http://www.cera.com)

**slash & burn:** An agricultural practice involving the cutting and burning of forest to remove the vegetation and release a pulse of nutrients to fertilize the soil. Ash also increases the pH of the soil, a process which makes certain nutrients more available in the short term, but usually to the detriment of long term. It is a sustainable practice only in areas of low population density, and overuse may result in desertification of the area. The term is normally applied to the practice as used in tropical rain forests.

**smuggling:** The illegal transport of goods, materials or people, most often across national borders. This is done to circumvent any laws prohibiting the items, or to avoid embargo, taxes, or regulatory inspection. The difference between smuggling and trafficking is that traffickers are those doing the buying and selling of the items, while the smuggler is the one actually transporting the goods. The two terms can overlap.

**strip mining:** One of several types of surface mining, the term is often used generically. Strip mining is the practice of mining a seam of mineral ore by first removing all of the soil and rock that lies on top of it. Variations include open pit mining and mountain-top removal mining. All surface mining practices require the removal and temporary or permanent displacement of a large quantity of non-ore surface material, which may disrupt or concentrate heavy metals in the water table.

proponent site: [www.teachcoal.org](http://www.teachcoal.org)

opponent site: [www.appvoices.org](http://www.appvoices.org)

**world bank:** A group of five international organizations responsible for providing finance and advice to countries for the purposes of economic development and poverty reduction. The World Bank's activities are focused on developing countries, for education, health, agriculture, environmental protection, infrastructure and governance. It provides loans at preferential rates to member countries, as well as grants to the poorest countries.

proponent site: [www.worldbankgroup.org](http://www.worldbankgroup.org)

opponent site: [www.globalpolicy.org](http://www.globalpolicy.org)



# pdf-based games.....

**BTRC** produces virtually all its products as downloadable, high-quality pdfs or print on demand items. In addition to the obvious reasons like reduced cost, it is more environmentally sound. A normal game, or other conventionally printed product goes through a number of steps to get from where it is designed to you. Some of these steps are going to be required regardless of how you utilize the game, others generate savings because of the pdf.

**Harvesting timber:** If you are going to print the game, you will need paper, just as if you had bought it off the shelf. At some point, recycled paper or not, timber had to be harvested and shipped to a paper making plant. No real savings there, but the choice of paper quality, color and whether or not it is recycled or has recycled content is up to you, not the publisher. Plus, there is no packaging and no packaging waste.

**Shipping:** Paper has to be shipped to the end user. This could be a conventional print job done on a large press and handled through normal channels, or a home-printed pdf:

## Conventional

Paper manufacturer to printer  
Printer to publisher  
Publisher to book distributor  
Book distributor to book seller  
Book seller to you to home

## Home-printed

Paper manufacturer to distributor  
Distributor to office supply store  
Office supply store to you to home

**Re-use:** You can re-use tokens, coins or pieces from other games in **soft landing**, for all-around savings.

**Storage:** The total material involved in the product has to be stored. Each link in the shipping chain is going to require warehousing or other climate-controlled storage. Since the pdf version is made using a compact ream of paper, coins or tokens, both the storage and shipping costs are lower.

**Price:** Because the cost of transporting the information in the game is merely bandwidth, the selling price of the game is far less than if it went through the normal publication route, with everyone in the chain needing to make a profit. While some of the reduced cost is offset by *your* time, ink and paper, the total cost is still significantly less than for a conventionally printed game.

**Durability:** Not really a manufacturing cost, but a side benefit of pdfs. If your copy of **soft landing** wears out, just print a new one!

soft landing

The point of these numbers is *not* to inspire gloom and doom, but to reinforce that there really *isn't* enough to go around, at least in the sense of giving everyone the same opportunity that most people reading this have, and to point out that while there may be solutions, it is likely that there are no *painless* solutions...

▲ The **BTRC** web page is [www.btrc.net](http://www.btrc.net), and has a full listing of our products and links to our on-line vendors. Among our titles:

**EABA:** An open-source rpg and compelling, esoteric gameworlds ranging from extropian cyberpunk to Biblical zombie horror to time travel to nanotech dystopia and more.

**Infinite Armies:** Downloadable, customizable card game, winner of the 2005 Origins Vanguard Award.

**End of Days:** Disaster threatens Earth. Can your nation build a rocketship in time to escape, or will political squabbles doom the human race?

and more...