

# 1 Starting The Game

- 1 Place the board in the middle of the table.
- 2 Shuffle the Enviro tokens and place one random Enviro token in each sector with the number facing up.
- 3 Place Territory of Advanced Development (TAD) tokens on the board.
- 4 Choose a color and place the Player Tablet of your chosen color in front of you.
- 5 Choose any two Refinery tokens of your color and put them next to you.
- 6 Take four Markers and place one on your Player Tablet at 10 Profits – this is your starting capital.
- 7 Choose five events of each level from the 30 Random Event cards. You must have Final Report among the chosen level III Event cards. Shuffle the cards of each level. First, put the level III Event cards face down next to the board, then put the level II Event cards on top of them, and finally put the level I Event cards on top.
- 8 Shuffle the Eco-Initiative cards and place them face down next to the board.
- 9 Decide which player will go first (i. e. who will be the starting player in the first turn), and place the figurine in the board corner corresponding to this player's color. The starting player places the first Refinery token on the board.
- 10 All Refinery tokens in the game are placed according to the following rules:
  - token on Oil, token on Minerals
  - A player may place their 1st token in any unoccupied sector; their 2nd and the following tokens have to be placed either in a sector which is already occupied (increasing the Refinery level), or in an adjacent Sector.
  - A sector may contain at most 4 tokens (level 4 Refinery).
  - If a sector is already occupied by a player, no other player may place their tokens in it.

After the starting player, in a clockwise direction each player in turn places one Refinery token on the board. The players place their 2nd tokens in reverse order, starting from the last player to place their 1st token.


- 11 When a player places a Refinery token in a sector with an Enviro token in it, they remove it from the board and use their Markers on their Tablet to increase their Enviro total by the value of the token.








## Everything's ready to begin the game!





## 2 Game Objective

Each player (or team) runs a mining company, and the more  you have on the board, the higher your income .

However, every Oil  and Mineral  Refinery damages the environment and reduces your Enviro total .

In Ecologic the player with the most Profits  and the most Enviro  at the end of the game wins. However, the ratio and balance between these strongly influences the final score (see final score calculation).

The better the balance between Profits  and Enviro , the higher the player's final score.


The game consists of turns; each turn has four consequent phases: Event, Action, Environment, and Income.

### Territories of Advanced Development (TAD) TADs give players unique advantages:



Stock Market allows its owner to participate in their initiated auction for half the actual bid (during Action phase).




Nature Reserve – each adjacent sector earns +1 Enviro  for the sector's owner (during Environment phase).



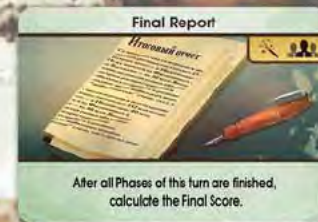
Academy protects its owner from negative event effects.





Transport Hub – each adjacent sector earns +1 Profit  for the sector's owner (during the Income phase).



## 3 Final Score Calculation

When the starting player draws the Final Report Event card, the players follow through all the phases of that turn and then count up their final score (FS).



To make the calculation easier, players can use the final score calculation table where they have to find where their final number of Profits  and Enviro  intersect – this number is their base point score.



	20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
40	2	4	6	8	10	11	13	15	17	19	22	24	26	29	32	34	37	40			
39	1	2	4	6	8	10	11	13	15	17	20	22	24	27	30	32	35	38			
38	1	2	4	6	8	10	11	14	16	18	20	22	25	28	30	33	36	39			
37	1	2	4	5	7	8	10	12	14	16	18	21	23	26	28	31	34	37			
36	1	2	4	5	7	8	10	12	14	16	19	21	24	26	29	32	31	30	29		
35	1	2	4	5	7	8	10	12	14	17	19	22	24	27	30	29	28	27	26		
34	1	2	4	5	7	9	11	13	15	17	20	22	25	28	27	26	25	24	24		
33	1	2	4	5	7	9	11	13	15	18	20	23	26	25	24	24	23	22	22		
32	1	2	4	5	7	9	11	13	16	18	21	24	23	22	21	21	20	19			
31	1	2	4	6	7	9	12	14	16	19	22	21	20	19	19	18	18	17			
30	1	2	4	6	8	10	12	14	17	20	19	18	18	17	17	16	16	15			
29	1	2	4	6	8	10	12	15	18	17	16	16	15	15	14	14	14	13			
28	1	3	4	6	8	11	11	16	15	14	14	13	13	13	12	12	12	11			
27	1	3	4	6	9	11	11	13	12	12	12	11	11	11	10	10	10	10			
26	1	3	5	7	9	12	11	11	10	10	9	9	9	8	8	8	8	8			
25	1	3	5	7	10	9	9	8	8	8	7	7	7	7	6	6	6	6			
24	1	3	5	8	7	7	6	6	6	6	5	5	5	5	5	5	5	5			
23	1	3	6	5	5	5	4	4	4	4	4	4	4	4	4	4	4	4			
22	2	4	3	3	3	3	3	3	2	2	2	2	2	2	2	2	2	2			
21	2	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1			
20	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20



For example, if a player finishes the game with 9 Profits  and 7 Enviro , they have 12 base points.

Exact formula for base point calculation:

$FS = K \times (X + Z)$ , where:

K is the balance coefficient:  $K = X / Z$

X is the lesser of the player's Profits  or Enviro 

Z is the greater of the player's Profits  or Enviro 

However, players then have to add the following to their base points:

+1 FS for each Refinery token they own on the board



+1 FS for each Eco-Initiative card they own

+2 FS for each TAD they have purchased and placed on the board

**Fractional numbers in the game are rounded up to the nearest whole number!**



## 4 Event Phase

The easiest and fastest phase of them all – the starting player draws the top Event card from the pile and reads it aloud. Event effects can affect all players  or only the starting player , giving them a privilege or punishing them.

In addition, each event gets activated during a certain phase:

In the Event phase



In the Action phase




In the Environment phase



In the Income phase



For example, the “Rich Horizons” Event is activated during the Income phase and affects all players, increasing income from their 1st level Mineral Refineries  (one Refinery token in a sector).






If the event does not activate immediately, put that card face up on top of the Event card pile so you don't forget about its effect in the necessary phase. Each event is described in detail on the reverse side of these rules.

**After the event's effect is activated, put the Event card face up next to the Event card pile!**

## 5 Action Phase


Each player one after another may start an auction, but only for one of the following: a Refinery token\* , an Eco-Initiative card\*\* or a TAD token\*\*\*.

\* Determine the initial bid: count all Oil Refinery tokens currently placed on the board (regardless of their color) and add 1 to that number. Place a Marker  on the respective value on the Oil Refinery token  price scale on the side of the board. Do the same to determine the initial bid for Mineral Refinery tokens . A player can start an auction for a Refinery token of any type with an initial bid not lower than the value set on the token price scale. After a player has purchased a Refinery token, they have to immediately place it on the board and increase the value on the scale by 1.




\*\* The player draws an Eco-Initiative card from the top of the pile. Its initial bid is shown in the top left corner of the card. If the player would like to start an auction for it, they may do that.

Otherwise, the right to start the auction for the revealed card goes to the next player.

If no player decides to start the auction for the Eco-Initiative, it is discarded face up in a pile next to the Eco-Initiative pile.

\*\*\* The player can choose any available TAD, starting the auction with an initial bid of 10 Profits .

Players one after another can raise the bid or pass, refusing to further participate in this auction. The player who enters the highest winning bid is obliged to purchase the auctioned item.

They subtract the winning bid from their Profits  by moving the Marker  on their Player Tablet. Then the next player may start a new auction. You may decide not to start any auction this turn, if you don't want to or if you have fewer Profits  than the initial bid. Then the turn goes to the next player.





**Players cannot raise bids above their total amount of Profits ! You cannot exchange, sell or give away Enviros .**






## 6 Environment Phase

During the Environment phase each player calculates the environmental impact of their production:

- Each Refinery token  on the board consumes one Enviro  from its owner.
- Each purchased Eco-Initiative card earns its owner 1, 2, 3, or 5 Enviros  in every Environment phase.
- Some events have environmental effects.
- Don't forget about the effect of the "Nature Reserve" TAD, if this token is placed on the board.

It is important to know that if players have to lose more Enviros  than they currently have, they must lose all they have, move the Marker  to the "Minus" value in the Enviros  block of their Player Table, and remove one of their Refinery tokens  from the board. Their polluting Refinery has been shut down! Don't let the situation turn into an environmental catastrophe.

For example, a player has four Refinery tokens on the board and an "Environmental Education" Eco-Initiative. Current event has no environmental effect. The player has 3 Enviros 



This means that in the Environment phase this player has to lose three Enviros  and move the Marker  to zero. The player does not lose any Refinery tokens this turn.

$$-4 + 1 = -3; 3 \text{ (total Enviros)} - 3 = 0$$




## 7 Income Phase


Similar to the previous phase, each player calculates their income:


- A player's income is added up for each Refinery they own, taking Refinery levels into account (see Player Table).
- Many Eco-Initiative cards require their owner to pay some Profits  every Income phase as a running cost.
- Some events have financial effects.
- Each occupied sector adjacent to the "Transport Hub" TAD earns 1 extra Profit  for their owner.


If a player does not have enough Profits  to maintain their Eco-Initiatives, they have to discard the ones they can't afford (i.e. put them face up next to the Eco-Initiative card pile).


Let's say a player has two level 1 Mineral  Refineries and one level 2 Oil  Refinery. The event of this turn is "Rich Horizons", and the player has the "Recultivation" Eco-Initiative.

The player earns 7 Profits :

+1 for each level 1 Mineral  Refinery = 2,

The "Rich Horizons" Event doubles the income from level 1 Refineries :  
 $2 \times 2 = 4$

+3 for one level 2 Oil  Refinery.

However, the player has to pay 2 Profits  for "Recultivation".

Therefore, they earn a total of 5 Profits  and add it to their account by moving the Marker  on the Profits  block of their Table.



After all Phases of a turn are completed, the next player in a clockwise direction becomes the starting player. They move the figurine  to their corner and draw a new Event card.



# I


## Oil Price Crash

*It hasn't happened for a long time, but the stock price of oil has plummeted!*

All  earn only half of total 


## State Support

*And here we're going to build an innovative brick factory!*

All players receive 



## The Only Contractor

*For some reason, your competitors have not attended the auction.*

Instead of starting an auction, you can buy  ,  
Eco-Initiative or TAD for its initial bid.


## Oil Price Rise

*It has been estimated that the world's oil reserves are not sufficient, and the price has skyrocketed.*



All  earn double 

## Lawsuit


*Your lawyers have done a great job - you have won a property lawsuit.*

You can remove another player's  from the board.


# LEVEL

Prices for energy resources are determined by stock indicators. Stock prices may fluctuate depending on supply and demand. If the player has only one  , it earns no Profits 

The government is directly interested in the development of industry because large enterprises provide employment and facilitate improved regional infrastructure.

The starting player can purchase a Refinery token  , Eco-Initiative or TAD and pay only the initial bid, while other players cannot interfere with it.

Prices for energy resources are determined by stock indicators. Stock prices may fluctuate depending on supply and demand.

Usually the side that loses a court case incurs significant losses. You may remove one Refinery token  of any player from the board.



### Environmental Expertise



All 1 do not consume 🌱

Modern industrial equipment has to comply with strict standards governing quality, energy efficiency and environmental impact.

### Rich Horizons

You have been lucky to discover deposits with a high concentration of minerals! Hurray!



Concentration of minerals in extracted ore can vary and depends on its location deep within the earth. Sometimes field development discovers large beds of ore with high mineral concentration.

### Visit from an Ecologist



All 1 do not consume 🌱

The main task of an environmental specialist is to introduce environmental regulations and standards approved by management. Sharing experience in this area helps significantly reduce the environmental impact of production.

### Production Accident



One Sector with the highest level earns no 💰

Even a small accident in a large facility stops the whole production process. No profit is earned while operation is suspended. If the player has several Refineries of the same level, one of them earns no Profits this turn.

### Outdated Equipment



All 1 earn no 💰

Outdated equipment has decreased efficiency and breaks down more often. This makes its repair costs exceed the earned profit. It makes more sense to replace it with new, expensive equipment.



## III

### "Green" Investments

*You have invested into "green technologies". However, not all environmental specialists are able to shape their ideas.*

Your 🌱 becomes equal to your 🌿

### Centralized Management

*You have improved the management system - now production is more efficient.*

All 🏭 earn double 🌱

### Oil Spill

*No time to explain - we need to clean up the spill and save the ecosystem!*

You have to pay 5 🌱 or remove two 🏭 tokens if you can't pay the required amount.

### Stock Market Rise

*The prime-ministers leaked e-mails have stirred the stock market!*

Each player can start one extra auction.

### Industrialization Program

*Give me a means of production and I shall move the world!*

🏭 for each turn taken this game (including this turn).

## LEVEL

Investing in "green" technologies may be successful or unprofitable. However, it takes time to see the effect of the investments. The player has to change the amount of 🌱 they have to be equal to their amount of 🌿

Any industrial facility is a complex system. Centralized management increases its efficiency and, therefore, its Profits 🌱

An oil spill always means huge financial expenses to prevent serious environmental consequences. The player has to pay 5 🌱 for the oil spill or else remove 2 of their Refinery tokens 🏭 from the board. If they do not have enough or any 🏭, the player loses nothing.

Various political and social events can influence economic activity, which often causes a stir in the stock market. Players may start additional auctions after all the main ones are finished, beginning with the starting player again.

An industrialization program includes partial compensation of expenses for the sustainable development of the industrial potential of the area.



### Trading Veto

Your distant relative is the auction chair!



You can cancel the results of one auction.

A veto cancels any taken decision. After any auction, a player may veto its results. All initial bids and players' Profit amounts return to their pre-Auction values, no token or card is purchased, and the auction is considered finished.

### Financial Crisis

The economy is in a downward spiral. Smaller companies suffer the most.



All earn no .

The world economy periodically goes through crises. Larger companies are more equipped to survive during especially dire depressions.

### Biased media

Several influential newspapers are suspiciously unanimous in their opinions about recent events. A coincidence?



You may change the price on the price scale of one of Refinery types by . After the first auction, the initial bid returns to its default value.

Prices of company stocks and goods can be significantly influenced by information in the media or expert forecasts. Auction participants try to influence stock prices by passing off rumors as reliable news or forecasts.

### Purchase of Competitor's Shares

A competitor is compelled to sell you the controlling stake in one of their production operations.



You can buy any player's for its nominal bid.

Buying competitor's shares can lead to a change in the company's regional management board. The player may buy another player's , if it is the only Refinery token in its sector. The buyer pays the initial bid of the token to its owner, and the owner cannot reject the deal.

### Corruption

You are lucky to have got off with only a fine, however large.



You lose a half of your .

Corruption has been around for a very long time. Unfortunately, it still is today. However, corruption is always uncovered sooner or later. If your Profits are an odd number, you lose half of that amount rounded up.





# LEVEL

## Infrastructure Development



*We'll build a town and a factory here despite what neighbors say!*



The player can place a that was purchased this turn and ignore the neighborhood rule. It costs 1 extra

Building a large facility requires the creation of many social institutions.

If the player has won an auction for a Refinery token , they may pay one extra Profit and place the token in any unoccupied sector.

## Flood



*A flood has destroyed an ecosystem that has been established for decades!*



All players lose half of their

Flood is a serious disruption to ecosystems and brings significant environmental damage.

If the player has an odd number of Enviro , they lose half of that amount rounded up.

## Patented Technology



*And you were wondering why you needed a research department...*



Each player gives you

Patenting technological solutions is an important component of modern industrial development. That is why companies aim to patent their inventions as soon as possible.

## Final Report



After all phases of this turn are finished, calculate the final score.

The region's long-term Sustainable Development Program has been completed. The regional administration is gathering business leaders to discuss the results.

## Brain Drain



*A competitor has lured your valuable specialists away.*



You have to give one of your Eco-Initiatives to the player to your left.

Good specialists are worth their weight in gold, and companies often poach them. Environmental professionals are no exception. If the player has any Eco-Initiatives, they have to choose one to give to the player to their left.



### Obligatory Switch to BAT



*From maximum allowable limits to best available opportunities!*

📦 and 📦 for each 📦

**Best available technology (BAT) is a progressive way to lower harmful emissions from production. If the player cannot or does not want to pay, they have to remove all unpaid Refineries.**

### Cartel Collusion



*If you don't know what they're talking about, it means they're talking money.*

You can choose one player to collude with.  
You both receive double 📦

**Two market competitors have held secret talks and decided upon a common market strategy.**

### Daily Grind



*When I was a child, I dreamed of becoming an astronaut...*

No events have taken place.  
And that is an event in itself!

**Fortis imaginatio generat casum (Latin – “The power of imagination creates reality”)**

### Industrial-Environmental Expo



*You can find things here that you couldn't even imagine.*

Each player can draw one Eco-Initiative and exchange it for one they own for the price of 📦

**Large exhibitions about environmental technology for industrial companies is a good opportunity to optimize production processes. It allows you to implement your long-term strategy to save resources and energy.**

### International Trading Platform



*1,000 handshakes, 50 business meetings, and 20 contracts in just one day!*

Each player can start an additional auction without bidding.

**Opening of a huge international platform is an important event! It definitely influences business activity in a positive way. Players may buy 📦 = 📦 + 📦, Eco-Initiative or TAD for its initial bid after main auctions are finished, starting from the initiating player.**



**The year 2027...**

**In the last 10 years, the world has been full of local conflicts over resources. Several regions have experienced technogenic and humanitarian disasters. Competition has grown for the resources of the Arctic which before were considered too scarce.**



**The International Research Group on Global Development (IRG-GD) develops scenarios for our global future: "Growth Limits 2050". Their conclusions are not reassuring: various countries are already experiencing economic stagnation, while developing countries struggle to maintain their economy at the expense of the environment. Local and international requirements for environmental protection are observed only superficially.**



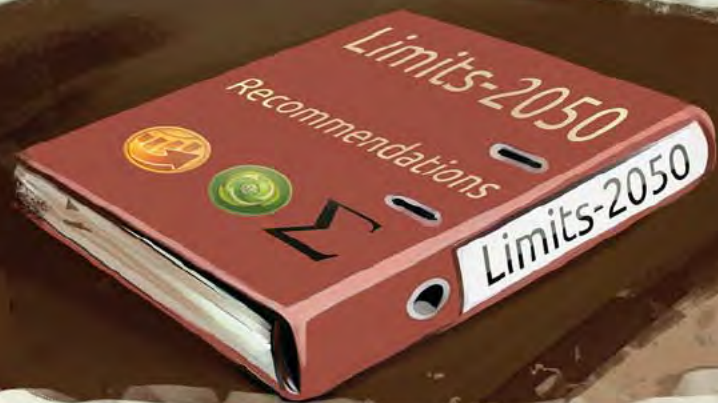
**One year later, the IRG-GD presents a report on global development up to 2050 at World Environment Minister Summit.**

**The main conclusion – it will not be possible to solve the world's economic crisis, the degradation of nature, and the increasing needs of the population (approx. 10 billion people) with a technological leap alone.**

**The research group is given the task of developing a new method for evaluating industrial production:**








Soon the IRG-GD publishes its Recommendations, which are:

- A unified approach to environmental assessment for all countries and companies
- A unified approach to technical requirements for industry
- Evaluation of long-term efficiency of industry using an integrated method.

“Conclusive Cross-Section” is the name given by the media to the efficiency evaluation procedure introduced in the scientific report. Conclusive Cross-Section soon becomes a global tool for the economic and environmental assessment of industrial companies: 83% of ministers vote in favor of it.



Vito Veritaz, system engineer and one of the IRG-GD experts (quote from an interview):  
“Conclusive Cross-Section is a good name, although industry people prefer to call it the “Final Report”. Everyone understands that in 10–15 years comes the decisive test for the company. Why Conclusive Cross-Section? This comes from the name “conclusive system cross-section” which we used in our discussion of the modelling results. A system cross-section is like an instant snapshot of the system, in our case – the global development of humanity.”



## What is Ecologic?

You run a company, and you need to earn a profit from extracting minerals and oil – that's business! Manage your income wisely: part of the money should be used to protect and restore the environment. Can you have a successful business and be a sustainable user of natural resources?

Ecologic will help you model various development scenarios where you must balance environmental and economic concerns – the key factors of development. The game has a “cumulative effect”: after playing it several times you will start understanding how to achieve sustainable and balanced development. Later you will learn to see several moves ahead and think strategically.



## First steps

We suggest playing the first few games with fewer events, e. g. only three events of each level (9 Event cards in total) instead of the standard deck of 15 events (see Rules for details). Additionally, TADs can be removed from the game: auctions take place only for purchasing Refinery tokens or Eco-Initiative cards, of which you can remove the four cards with initial bid of 12 Profits. After reading through all the rules, 4-player games usually last less than 1 hour.

**Have you perfected the game process?  
Can you see several turns ahead?  
Have you taught novice players? Then it's time to...**

- Play as a board of directors. There are only four player colors in the game, but two people can play together as the same color and make joint decisions. Then a total of 8 players can play the game.
- Play in teams. You can still make independent decisions, but for the final score calculation, two allied players add their Profits and Enviros together. The other two allies do the same. This makes for a very unusual game process.
- Create unique scenarios. You already know Event cards quite well. If you are leading the game, create your own scenarios by arranging the events in a specific order (unknown to the players). If you would like to have a longer game, use all 30 Event cards – then a 4-player game could last up to 3 hours.
- Add more randomness. Do you want to be surprised? Place the Enviro tokens face down. Or shuffle Event cards of all levels together!
- Make deals freely. That is the cherry on the cake of Ecologic's trading possibilities. Do you want to borrow some money? Buy (sell, exchange) an Eco-Initiative? Speak up and look for a trading partner. If the deals are numerous or complicated, we recommend keeping a record.



**IMPORTANT: free deals are a part of the game and should not introduce chaos into it. That is why they can be made only during the Action phase. A player may propose a deal before declaring their auction.**

**Players CANNOT:**

- Make any deals with Enviros (sell, borrow, etc.)
- Move Refinery tokens on the board
- Raise a bid at an auction above your available amount of Profits




**Players CAN:**

- Close (remove from play) their own Refinery tokens during the Action phase, but not more than one token per turn
- Cancel (discard) their own Eco-Initiative cards during the Action phase
- Do anything that the rules do not forbid

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 /ecologic4people  
 /ecologic4people  
 ecologic4people@yandex.ru