

Resource & economy System revised

This concept only covers economic features of civs. Military will be covered in a separate topic to keep this thing small. Some aspects of economy of course affect military as you'll see later, but this is not the main argument at the moment. Military design and economic design will be tweaked to fit each other for every civ type. At first: I'd suggest to pair civilizations into groups (i.e. Hellenic Civs, Nordic civs, Indian/African civs and so on). I've covered Gauls, Britons, Iberians, Spartans, Athenians and Seleucids so far as more-or-less specific layouts. This again is not a 100% finished layout with every detail covered. Instead it's a general guideline to differ civs from each other and allow to create unique game play patterns for each of them. More than they currently are. The other civs will come later as I need to create something unique for them aswell. I'll expand this concept for them in the next update(s).

A .pdf is attached to be bottom of this post.

I. General thoughts on resources

Every strategy game requires resources. The resources have to fit the game and players should have a choice whether collecting which resource is more important to them (strategic diversity). Each resource needs to fulfil a certain "role" that gathering it accomplishes it.

To prevent "overburdening" the game with resources there has to be a flow in the game to naturally lead players towards gathering new resources (i.e. a progression from resource A into resource A+B into resource B etc.). Resources that already are gathered by players may not become redundant (because it's replaced by another resource).

If this is done well the economy management doesn't become boring or unhealthy for the game and allows interesting, different types of playstyles where players decide how they are going to prioritize their gathering and army setups.

Citizen/cavalry gatherers removed

Yes I know this is a drastic change from the current concept. Yes, it will require reworking parts of the game. However, this is also the opportunity to improve the overall gameplay quality.

Advantages of Citizen Soldiers/gatherers:

- Usage of military units when not in combat
- Especially cavalry can gather far away by hunting
- Easy transition from economy to fighting

Disadvantages of Citizen soldiers/gatherers:

- No distinction between economic and military units (an integral part of every RTS)
- Since many gatherers can be active at the same time (economic + every military) gathering rates have to be poor to avoid “economy explosions” which means that the resource income increases exponentially with each additional soldier
- Players lose resources when attacking, short math example:
 - o Soldier collects 0.5 food per second, 30 soldiers work as gatherers which means 15 food/second income (or 900 food/minute).
Now if the 30 soldiers move to the enemy the player will lose 900 food every minute from his soldiers not gathering. Provided that the enemy has a similar army/economy that means that he’ll be ahead with 900 food for each minute he can gather (which would be equal to ~10 or more soldiers).
 - o The attacking player needs to destroy more than 900 units worth of food every minute to get an advantage from his attack. If he can’t do that his attack actually weakens the Attacker instead of the Attacked -> unbalanced by design
 - o Fixes: soldiers move at unrealistic ultra high speed (less time to get to the enemy) or lowering the gathering rates. The issue is the same still, attacking player initially has a large disadvantage
- There is no progress from weakest -> strongest unit. Instead the players already start at a high level and then only progress in very small steps towards higher tech levels
- Citizen soldiers discourage capturing as they are efficient at protecting the base early on, rendering capture rather useless
- To get citizens back to work is a very fiddly task and annoying compared to regular economic units

Overall it’s better to adjust gathering to specialized units for each civ type instead of giving every civ the ability for soldier gathering. This makes civs more diverse (-> more gameplay depth). One (poor) game mechanic lost for a massive gain in playability is more than worth it.

Building layout (general)

1. Civic Centers are buildable from the start. City influence radius reduced. Can train a weak “militia type” unit and slingers. Slingers can be used to help hunting and Militias are weak units that can be used to harass and defend. Both units hard counter each other (slinger > militia, but in close combat militia beats slinger because of much lower hitpoints)
2. Storehouses, Sitobolon structures buildable in neutral territory
3. Farms require neutral territory, affected by gathering duration (fertility) – fields initially generate resources very slowly, but the rate increases the longer it is harvested by gatherers. When the gathering stops the field fertility decreases. To-do: Generate map areas in which farms are more productive (a possible map control element)
4. Military structures are postponed to City Phase, units are split up and not available all at once – either by per-building upgrades (only coding required, could be a workaround) or by splitting up the buildings into classes – Barracks, Stable, Archery range type classes (requires artworks), depending on civ type.

Gatherer Limits:

Food: 2/4 (for small/large food sources)

Wood: 3 (for all trees)

Stone, Iron, Silver: 3/5 (like food)

Food – basic resource. Used for training units, upgrades (military), melee infantry & slingers, City advancing

Wood basic resource. Used for military training (support/ranged units, ships). Used for economic upgrades, use for low tier buildings

Stone – resource that constructs high tier buildings and expansions (civic centers, barracks, temples, gymnasium etc.)

Iron - basic military resource, all basic melee military units require metal (swordsmen, pikes and cavalry).

Silver - advanced military resource - is important for military improvement techs and used for training superiors, elite units. Slow to gather.

Population - instead of being only connected to houses, population is influenced by city size (village - town - metropolis). Required to train units (obviously)

Population cap (thoughts)

Houses are hardcapped at ~10 houses per city. Depending on city level they can provide 10-20-30 population each. Alternatively: Military requires no population and is only depending on the food that is available from gatherers. Gatherers require population from houses and are hard capped per city.

In a logical sense, soldiers that are at war do not sleep in houses, so it's rather strange that they take up pop from the city houses. Instead, armies rely on being supplied with food, water, weapons etc. from their home cities. This concept could be further elaborated, as I think it would fit the city Advance system.

Alternatively, each city grants a fixed amount of population. Houses then are scrapped. I'd keep houses for the sake of being authentic though. houses belong into cities.

Upgrade System

Phase advancing: Food and Stone

Economic upgrades: Lumber and Iron

Military unit unlocks: Food/Lumber & Iron (ranged and melee units)

Military unit type upgrades: Food and Silver

Blacksmith “System“

Blacksmiths automatically reduce army Iron costs and increase the training speed for Sword wielding units. It can further research Metallurgy type techs that allow faster training, and allow further, cheaper unit production. Upgrades are not tied to City Phases anymore.

Concept: Blacksmith generates “experience ranks” over time which allows more advanced upgrades to be researched.

Corrals

Can garrison captured herdables to provide food over time. Idea taken from the "intended" version of 0AD which isn't finalized yet.

Gameplay reasoning

There should be a transition from one type of resource to others, similar to this: food -> wood -> metal -> stone/silver. Players are not overly confused with gathering many resources from the start. As the game progresses the economy complexity increases. Early civic center expansion allows to take additional gathering spots and economic advances. Gatherers training times can be increased since it's possible to train them in multiple buildings. Since gathering spots are limited there has to be economic expansion to fit all gatherers to the spots.

Phase advances that require stone - this way, players automatically need to gather a resource that will be more important in city phase, i.e. to build Phase II buildings.

Military unit upgrades (like "advanced training" or unlocking certain units) create a resource transition towards Silver.

II. Hellenic Factions (Sparta, Athen, Seleucids)

Economic concept: Hellenes are defensive civs, and thus have bonuses for foraging berries and decent farming. Gathering rates are comparably high, so they can exhaust their own resources more quickly. Slaves are free gatherers that can be trained, have a hardcap that can be increased with City Phases and Slavery Techs.

Athen speciality: silver mines last 20% longer

Sparta speciality: slaves have 10% faster gathering rates, hoplites 15% faster, start at veteran rank

Seleucid speciality: farming rate +50% (rate at which farming productivity increases)

Gatherer types:

Women (50 food, 1 pop)

Gather rates: food

Hunt :	1.25
herdables :	1.25
berries :	1.50
grain :	0.80

Gather rates: wood

Trees:	0.6
rubble trees:	1.2

Gather rates: stone

Quarries: 0.4
rubble stones: 0.8

Gather rates: iron

Iron mines: 0.3
ambient iron: 0.6

Gather Rates: silver

Silver mine: 0.2

Slaves (no cost, no pop. Have a hardcap)

Gather rates: food

Hunt : 1.4
herdables : 1.25
berries : 1.00
grain : 1.00

Gather rates: wood

Trees: 0.8
rubble trees: 1.2

Gather rates: stone

Quarries: 0.8
rubble stones: 1.2

Gather rates: iron

Iron mines: 0.6
ambient iron: 1.2

Gather Rates: silver

Silver mine: 0.4

A second type of gatherer that excels at mining. There are 2 options for them to be limited: either they automatically start to lose health if there are too many at one place, or they are simply hardcapped by default. It would be interesting to utilize capturing features to increase the maximum slave count. I.e. for 5 wounded/killed soldiers on the battlefield the number of slaves trainable increases by 1. So, by slaying enemy units the economic power rises for Hellenic civs. Due to the amount of gatherers per resource spot, having hundreds of slaves isn't profitable as there is a need for more gathering spots to collect resources from.

Buildings:

Economic: wood only
Military: wood and stone
Civic: stone and food

Iron: none
Silver: none

III. “Nordic” Civilizations (Iberians, Gauls, Britons)

Economic concept: Opposed to Hellenes civs “nordic” civs rely more on hunting. They are mainly offensive civs to start with. Their buildings do not require much stone (if at all) but are less sturdy. Gathering rates are lower for farming and mining stone. The treadmill can be used to increase farming at a later civ stage to bring them on par with other civ’s lategame food economy.

Early huntables creates power spikes because they can advance quickly and field armies in a shorter period of time. Also, this allows more spreading and early expansion. While Hellenes need to consider how many cities they can supply and defend, the Nordic civs can play a rather mobile earlygame with rushes and lots of interaction with gaia.

Civ special advantages: villagers and Hunters receive weapon upgrades from the Blacksmith.

Iberian speciality: Start with additional metal, soldiers have 20% bonus speed, iron gathering +15%
Gauls speciality: +50% bonus damage against animals, units that are hunting have higher accuracy
Cavalry +20% faster
Britons speciality: Gathering from herdables +50%, herdables in stables provide more food

Villager (50 food, 1 pop)

Gather rates: food

Hunt :	1.5
herdables :	1.5
berries :	1.0
grain :	0.60

Gather rates: wood

Trees:	0.7
rubble trees:	1.2

Gather rates: stone

Quarries:	0.2
rubble stones:	0.6

Gather rates: iron

Iron mines:	0.4
ambient iron:	0.8

Gather Rates: silver

Silver mine: 0.2

Villagers are both male and female. They can utilize spears or bows for hunting. Melee defense with knives/swords.

Hunter (80 food, 40 wood, 1 pop)

Gather rates: food

Hunt : 2.5
herdables : 2.25
berries : 1.50
grain : 0.80

Gather rates: wood

Trees: 0.6
rubble trees: 1.2

Gather rates: stone

Quarries: 0.4
rubble stones: 0.8

Gather rates: iron

Iron mines: 0.3
ambient iron: 0.6

Gather Rates: silver

Silver mine: 0.2

Hunters are mounted gatherers that can move swiftly around. They attack with spears and with upgrades/veterancy level they perform as a skilled mounted skirmisher unit.

They can harass from the start, but due to a low attack rate with miss chance they are not that good to hit moving gatherers. As they kill animals their rank increases and they become more effective at raiding enemy economic units.

Buildings:

Economic: wood only
Military: wood only
Civic: wood and food (!)
Iron: none
Silver: none

edit: removed-Special building : Corrals

IV. Map control elements

The game should be dynamic. Players should have options for economic expansion and there should be fluent progress on the whole map, with increasing intensity towards mid and lategame.

Many current RTS games revolve around a central “base” from which all major actions are taken. Units trained, teching accomplished, resources gathered etc. Outposts or second bases have less priority because the risk – reward ratio (hard to defend, little benefits in return) is high.

For 0 AD I’d like to propose a concept of “fluent expansion”. Since this game features unique aspects – city borders, city phases and a default capturing system for every military unit it would be beneficial to actually concentrate on these aspects.

To further emphasize the city progression and the construction of an empire, it’s important to have interaction with the map. Constructing outposts – new cities – that can supply the Capital city to grow in prosperity and power should be a vital part for the course of the game.

However, to avoid common issues from other RTS – economic expansion is punished hard by early rushes. Since eco management is pretty basic in many games, not punishing early economic expansion would lead to massive unit spam and create war of attrition, so it’s not desirable. Sort of basic and not very unique. Every game does that.

0 AD features a detailed economy, and so the early focus should actually be economic expansion. Only very basic military available that allows players to focus on where to expand, which positions are worth to create new cities etc.

And then, as the game progresses, players can start gathering armies and start fighting. Many players enjoy “no rush” gametypes in which they can actually “build up” before the fighting starts – so rushing, even though it’s common in many RTS, is not the prime and sole option to solve games.

By delaying military there is the option for players to satisfy their desire to “build” and then allows a fluent progression into fighting the enemy.

How to achieve?

1. Allow military to interact with the map instead with the enemy only. By providing neutral targets that can be captured (like neutral Villages, cities, mercenary posts, slave posts, markets etc.) that can provide military and economic bonuses on a long term by increasing the player’s influence.
2. Allow military to attack positions apart from the main city. By providing multiple possible targets the strategical aspect becomes important – where to attack with how many units, fake attacks to disrupt the player, parallel harassment with multiple small armies which rewards multitasking, etc.

3. Distribution of map resources and hardcapping gatherers to force expansions. If players are forced to explore the map and expand to gain more resources it's important to know and anticipate where and when the enemy is likely to expand. Game experience and strategical "what if" thinking and decision making is fun and rewarding.

Ideas:

Easiest: captureable herdables that can be used for food.

Slave posts: automatically unlock the option to build slaves in cities for a silver cost.

Mercenary post: train map type specific military units that provide additional tactical options in army compositions, instant and at a higher cost.

Neutral cities: a small settlement or city with gatherable resources nearby, like a small gaul village, protected by some soldiers and has a couple of houses, maybe some farms. Can either be captured (expansion) or burned down to get immediate resource boost (food, iron, wood)

Temples: neutral buildings that generate silver, or allow to train special types of support units that otherwise would only be available to certain civs (similar to a merc camp for non-combat units)

Mines: generate iron indefinitely and work similar to farms

How the actual implementation and which bonuses are provided is a secondary task. As long as the neutral building creates the urge for players to explore and expand it's all fine. I'm open for additional ideas for neutral buildings for sure.