city_landlocked_sell_coastal_improvements() in server/citytools.c tries to check buildings that have missing reqs after the terrain of an adjacent tile changes (Harbor, Coastal Defense etc.).

It's broken starting at 2.6 in that it only checks reqs of type "Terrain" or "TerrainClass", not e.g. "TerrainFlag" which is used as a req for Harbors to exclude Lakes (in civ2civ3). [1] [2] Also, it sells all buildings with any Terrain reqs, including e.g. the different sorts of Aqueducts, regardless of if the reqs are filled or not. This appears to be because it doesn't pass the terrain struct to is_req_active().

It seems that the only reason it works at all for Harbors is that there's this hardcoded check for ocean tiles:
!is_terrain_class_near_tile(tile1, TC_OCEAN)

Suggest changing it to also pass the tile struct and simplify it by calling are_reqs_active() as in can_city_build_improvement_direct() [3], which I suppose is what is checked when actually building the buildings.

(That still wouldn't make it work with e.g. City ranged Terrain reqs, since the function is only called when neighboring terrain changes.)


Related issues:
Related to Freeciv - Task #880778: remove_obsolete_buildings_city works too rare New
#5 - 2020-07-10 11:08 AM - Alexandro Ignatiev
- Related to Task #880778: remove_obsolete_buildings_city works too rare added

#6 - 2020-11-23 12:03 AM - Marko Lindqvist
- Category set to Server
- Status changed from New to In Progress
- Assignee set to Marko Lindqvist
- Sprint/Milestone set to 2.6.3

#7 - 2020-11-23 12:08 AM - Marko Lindqvist
Patch here seems like a good improvement for the time until we get a better solution. Will you make a version that applies to later branches (it didn't for master, didn't test for S3_0)?

#8 - 2020-12-03 05:23 PM - Marko Lindqvist
- Assignee deleted (Marko Lindqvist)

#9 - 2020-12-20 06:54 PM - Ilkka Virta
- File 0001-Fix-city_landlocked_sell_coastal_improvements-30.patch added
- File 0001-Fix-city_landlocked_sell_coastal_improvements-26.patch added
- File 0001-Fix-city_landlocked_sell_coastal_improvements-master.patch added

Looks like it's mostly just that is_req_active() has one argument more in the newer versions that prevents the patch from applying at all. These should apply better.

#10 - 2020-12-21 07:18 AM - Marko Lindqvist
- Status changed from In Progress to Resolved
- Assignee set to Marko Lindqvist
- Sprint/Milestone changed from 2.6.3 to 2.6.4

I'm a bit worried that is_terrain_class_near_tile() condition removal can have some surprising consequences, so not rushing this in to 2.6.3 at this point but wanting to expose it to more testing (in 2.6.4 cycle) before releasing it.

#11 - 2020-12-22 01:00 PM - Ilkka Virta
- File 0001-Fix-city_landlocked_sell_coastal_improvements-26-safer.patch added

Marko Lindqvist wrote:

I'm a bit worried that is_terrain_class_near_tile() condition removal can have some surprising consequences, so not rushing this in to 2.6.3 at this point but wanting to expose it to more testing (in 2.6.4 cycle) before releasing it.

I think it could also just be left there.

With the !is_terrain_class_near_tile(tile1, TC_OCEAN) condition, any oceanic tile protects all terrain-dependent improvements, which seems technically wrong. The difference I can see is with a city that is adjacent to a Lake and an Ocean, and has both Aqueduct, Lake, and a Harbor. :) With that condition, they only get sold when both are lost; without it, they get sold according to which one of Lake or Ocean gets lost. Not a very general case, I suppose.

#12 - 2020-12-22 01:21 PM - Ilkka Virta

Ilkka Virta wrote:

I think it could also just be left there.

That patch being a version that doesn't touch that hard check.

About the issue not directly related to the bug, generalizing the terrain checks, some thoughts:

One possibility would be to add a new reqs list, e.g. exist_reqs and treat the current reqs as "build reqs". The latter would be checked only when building, and the former would be checked on every turn, for each building. That somewhat duplicates what obsolete_by does, but wouldn't need to be tied to new techs being researched and carries a different message. And could be used to send literally different messages from the server code.
Alternatively add a hard flag to the reqs for those reqs that should be checked every turn. Then of course, there's the case of buildings that should stop working based on some condition, but not get auto-sold... That can probably be done with effects well enough, though, and isn't that important so I'll stop digging deeper into the rabbit hole now.

#13 - 2020-12-31 10:01 AM - Marko Lindqvist
Ilkka Virta wrote:

    Marko Lindqvist wrote:
    I'm a bit worried that is_terrain_class_near_tile() condition removal can have some surprising consequences, so not rushing this in to 2.6.3 at this point but wanting to expose it to more testing (in 2.6.4 cycle) before releasing it.

    I think it could also just be left there.

I think we take to 2.6.4 the patch version where it is, i.e., I still plan to push the previous version once we get 2.6.3 out of the way.

#14 - 2021-01-02 09:27 AM - Marko Lindqvist
- Status changed from Resolved to Closed

Files

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