Controlled Spawn & Waypoint Randomizr Script (CSWR)

Last update: v4.5

What is this script:

CSWR is an *Arma 3* script that spawns AI units and makes those units (with vehicle or not) move randomly to waypoints forever in life, where spawn points and waypoints are pre-defined by Mission Editor through Eden marker's positions. CSWR is able to spawn also ground vehicles with their crewmen, and accept pretty well unit loadout customization.

For multiplayer and single-player:

CSWR works for all game purposes like multiplayer and single-player.

For Hosted and Dedicated servers:

CSWR was built for both server types, mainly dedicated ones.

Populate missions with civilians only if needed:

Yes and easily. You can spawn just a faction, or two, or all of them. As you wish.

Compatible with ACE, RHS, CUP, or any others:

Yes! You can call whatever classnames of units and vehicles in *fn_CSWR_population.sqf* file.

CSWR cannot spawn air or nautical vehicles yet:

Not yet, but you can spawn soldiers and civilians in water when needed.

Loadout customization:

Yes, including uniforms, vests, and backpacks, respecting the items inside the original ones and transferring them to the new gear. Check how to customize the faction loadouts.

Debug monitor and feedback available:

Go to */CSWRandomizr/fn_CSWR_management.sqf* and change the value of the *CSWR_isOnDebugGlobal* variable.

If you need an SQF editor:

Sure, I'm using *Visual Studio Code* with this customs specific for *Arma 3*:

https://forums.bohemia.net/forums/topic/239960-vs-code-tutorial-how-to-config-vs-code-for-arma-3-2023/

If you need something simpler:

https://notepad-plus-plus.org/, install it and, when you open some script file, go to Notepad++ main menu, "Language" and select "C" as file language. That's it.

How to run the script for a first look:

1. Go to https://steamcommunity.com/sharedfiles/filedetails/?id=2740912514
2. Subscribe and wait for Steam to download it;
3. Open Arma 3, go to Multiplayer > Server browser > Host server > click Host Server button;
4. Select "Stratis" map and, after that, select "CONTROLLED SPAWN AND WAYPOINTS RANDOMIZR";
5. Play.

Important: if you want to apply this script in your own missions, check this out.

How to install the script in my own mission: ★★★

1. Go to:

   https://github.com/aldolammel/Arma-3-Controlled-Spawn-And-Waypoints-Randomizr-Script

2. Download the zip and open it;

3. In zip, find the folder "CSWRandomizr" and copy it to your mission folder root:

   DRIVE:\Users\yourName\Documents\Arma 3\yourProfile\missions\yourMission\

4. In the mission folder root, if you don't have a "description.ext" file, create one and there add the code down below:

```
class cfgFunctions
{
        // CONTROLLED SPAWN AND WAYPOINTS RANDOMIZR
        #include "CSWRandomizr\THY_CSWR_functions.hpp"
};
```
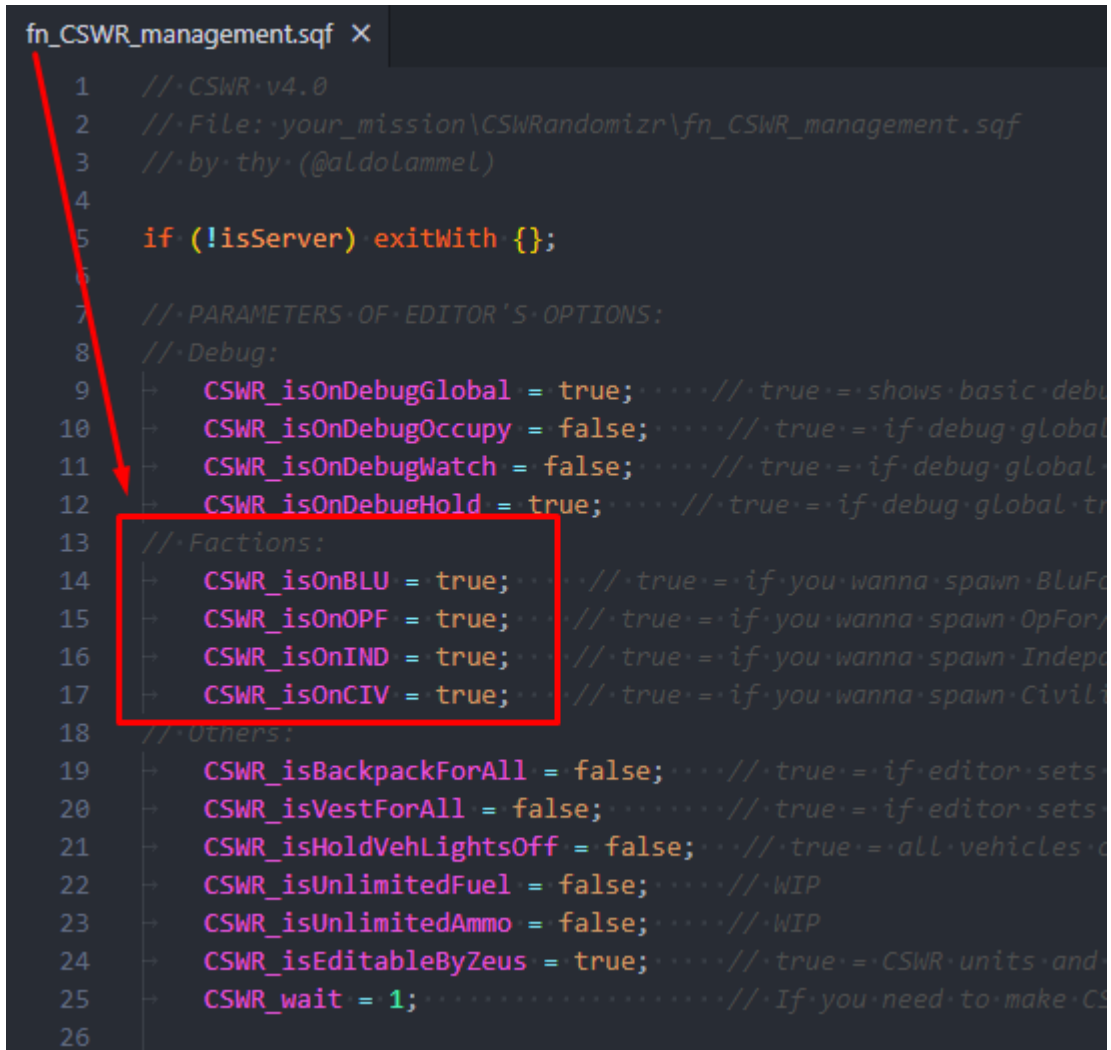
5. Now, just create your custom faction(s)!

Define the factions to spawn:

In Arma 3, there are 4 factions available: Blufor, Opfor, Independent, and Civilian. All of them are built by groups that are composed of units (soldiers/people). With CSWR you can spawn dynamically one or all factions. It's up to you. Let's do it, opening the file: \CSWRandomizr\fn_CSWR_management.sqf

Set as *true* the faction you want to spawn through CSWR:

```
fn_CSWR_management.sqf  ×

1    // CSWR v4.0
2    // File: your_mission\CSWRandomizr\fn_CSWR_management.sqf
3    // by thy (@aldolammel)
4
5    if (!isServer) exitWith {};
6
7    // PARAMETERS OF EDITOR'S OPTIONS:
8    // Debug:
9        CSWR_isOnDebugGlobal = true;      // true = shows basic debu
10       CSWR_isOnDebugOccupy = false;     // true = if debug global
11       CSWR_isOnDebugWatch = false;      // true = if debug global
12       CSWR_isOnDebugHold = true;        // true = if debug global tr
13   // Factions:
14       CSWR_isOnBLU = true;          // true = if you wanna spawn BluFo
15       CSWR_isOnOPF = true;          // true = if you wanna spawn OpFor/
16       CSWR_isOnIND = true;          // true = if you wanna spawn Indepe
17       CSWR_isOnCIV = true;          // true = if you wanna spawn Civili
18   // Others:
19       CSWR_isBackpackForAll = false;    // true = if editor sets
20       CSWR_isVestForAll = false;        // true = if editor sets
21       CSWR_isHoldVehLightsOff = false;  // true = all vehicles
22       CSWR_isUnlimitedFuel = false;     // WIP
23       CSWR_isUnlimitedAmmo = false;     // WIP
24       CSWR_isEditableByZeus = true;     // true = CSWR units and
25       CSWR_wait = 1;                    // If you need to make CS
26
```

How to define who is the enemy:

CSWR works with what you have defined through Eden Editor:

1. On Eden main menu, go to Attributes > General;
2. In the "General" window, look for "Misc":

3. As BluFor and OpFor always are enemies of each other, you only need to define who is the Independent enemy, by clicking over the side flag.

Define the Spawn points of each enabled faction:

In CSWR, the AI will use also some predefined markers as spawn points, which they will use randomly through two ways: 1) right before the mission gets started; or 2) using the Spawn Delay methods. The regular spawn can take a while like 1 or 2 minutes to be fully finished, depending on how many units CSWR will create for you. Each faction should have its own spawn points, never sharing them.

Define them on Eden Editor, dropping a "Select" marker on the map and name it based on the example down below and the faction(s) you got enabled in *fn_CSWR_management.sqf* previeously:
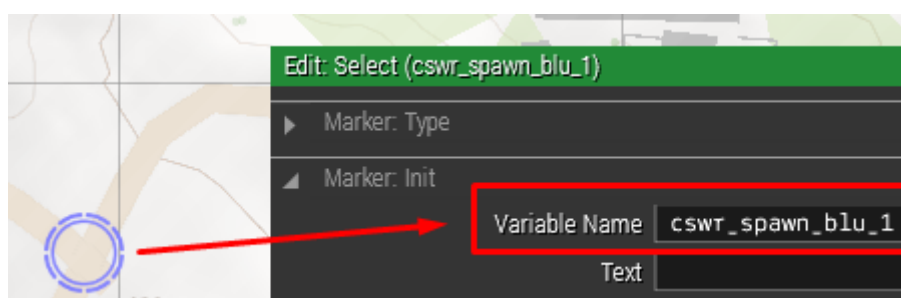
An example of spawn point and its attributes on Eden Editor.

To find out the "Select" marker on Eden, in the Assets menu, click on "Markers" (F6) and, after that, "System" on the category list. There, you will find out "Select" marker.

Faction:	Method description:	On Eden Markers:
BluFor	Spawn for BLU soldiers and vehicles	cswr_spawn_blu_1 cswr_spawn_blu_2 …
	Spawn exclusively for BLU vehicles	cswr_spawnveh_blu_1 cswr_spawnveh_blu_2 …
OpFor	Spawn for OPF soldiers and vehicles	cswr_spawn_opf_1 cswr_spawn_opf_2 …
	Spawn exclusively for OPF vehicles	cswr_spawnveh_opf_1 cswr_spawnveh_opf_2 …

Independent	Spawn for IND soldiers and vehicles	cswr_spawn_ind_1 cswr_spawn_ind_2 …
	Spawn exclusively for IND vehicles	cswr_spawnveh_ind_1 cswr_spawnveh_ind_2 …
Civilian	Spawn for IND soldiers and vehicles	cswr_spawn_civ_1 cswr_spawn_civ_2 …
	Spawn exclusively for IND vehicles	cswr_spawnveh_civ_1 cswr_spawnveh_civ_2 …

Of course, you might add or remove spawn points as much as you want since you don't forget to make sure the faction is "TRUE" on *fn_CSWR_management*.sqf file:

Spawn Delay methods:

If you want to make the groups and/or vehicles of one or more factions spawn lately in the mission, you can use 3 spawn delay methods to trigger those late spawns.

In *fn_CSWR_population.sqf* file, through the *Spawning groups' section*, the last array "[ ]" of each group or vehicle is responsible for setting which method (or methods) the group will execute in the game.

| Method:	Description:	On file:
Timer	Define a unique integer or float number (in seconds) that represents the time for the group to execute its spawn later in the mission.	[600]
Trigger	Define one or more triggers on Eden Editor that, when activated, allow the group to execute its spawn later in the mission.	[my_trigger_1] Or [my_trigger_1, my_trigger_2]
Target	Define one or more objects (soldiers/people/building) on Eden Editor that, when killed or destroyed, allowed the group to execute its spawn later in the mission.	[target_1] Or [target_1, target_2, target_3]
Timer + Trigger	You can mix the methods. The first one reached will allow the group/vehicle to spawn immediately.	[600, my_trigger_1] Or [3600, my_trigger_1, my_trigger_2]
Timer + Target		[60, target_1] Or [60, target_1, target_2]
Timer + Trigger + Target		[60, my_trigger_1, target_1] Or [60, my_trigger_1, target_1, target_2]
Trigger + Target		[trigger_1, my_trigger_1]
No Spawn delay	Set the group/vehicle to spawn right after the mission starts. Default!	[ ]

Editing the Spawn Delay of BluFor faction in *fn_CSWR_population.sqf* file.

Important: for groups and vehicles with more than one Spawn Delay method, it's important to know that the first method reached to allow the spawn, it will ignore the other methods configured for that group and it will allow the group to spawn immediately.

Set the faction destinations (waypoints):

In CSWR, almost there's no end-point, which that means after the group spawns, it will move through the map directly to the predefined destinations (waypoints), randomly, and can take a break just a while before to go to the next same destination type.
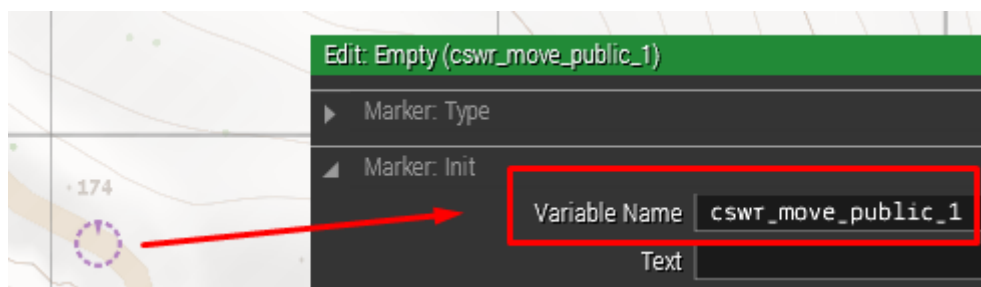
An example of destination marker and how CSWR recognizes that on Eden Editor.

Each faction's group configured to spawn can have (or not) a different destination. All types of groups (except sniper teams) will move forever from one marker to the other until the mission is over or the group has been eliminated.

Below, are all kinds of destinations available for you name it on Eden Editor markers:

On Eden markers:	Description:

move	Move destinations are the simplest marker used in CSWR. A group of soldiers or a lone vehicle using it, after spawning, will go to one of them randomly, spend a while and move on to the next move marker.
cswr_move_public_1	Move destination used by everyone assigned to use that.
cswr_move_blu_1	Move destination used by Blufor groups assigned to use that.
cswr_move_opf_1	Move destination used by Opfor groups assigned to use that.
cswr_move_ind_1	Move destination used by Independent groups assigned to use that.
cswr_move_civ_1	Move destination used by Civilian groups assigned to use that.
hold	Hold destinations are markers with the goal to hold the position of groups of soldiers. Hold-marker can also be used by one tracked vehicle (tank, IFV) that after the spawn the vehicle will go there and hold position <u>almost exactly</u> over the marker position and heading for the marker direction. Soldiers using hold destinations always will avoid being over the roads/streets and never in the hold-marker center position (reserved for tracked vehicles). After spawning, the hold-groups will go to one of them randomly, spend a long time there and then move on to the next hold marker. <mark>It's advised to don't use hold-markers over the roads/streets to avoid vehicle crashes.</mark>
cswr_hold_blu_1	Hold destination used by Blufor groups assigned to use that.
cswr_hold_opf_1	Hold destination used by Opfor groups assigned to use that.
cswr_hold_ind_1	Hold destination used by Independent groups assigned to use that.
cswr_hold_civ_1	Hold destination used by Civilian groups assigned to use that.
watch	Watch destinations are markers designed exclusively for soldiers (not vehicles) of <u>sniper teams with one or two units at maximum</u>. Once the spawning runs, the sniper team assigned with a Watch-destination will go around the marker, looking for high spots with some vision of the marker position. After the team's arrival, the snipers will stay there (never changing the location) until the mission ends or they are dead.
cswr_watch_blu_1	Watch destination used by Blufor groups assigned to use that. <mark>Vehicle is not possible.</mark>
cswr_watch_opf_1	Watch destination used by Opfor groups assigned to use that. <mark>Vehicle is not possible.</mark>
cswr_watch_ind_1	Watch destination used by Independent groups assigned to use that. <mark>Vehicle is not possible.</mark>
~~cswr_watch_civ_1~~	<mark>Civilians cannot use watch-markers.</mark>

occupy	Occupy destinations are markers where a group of soldiers (<u>at maximum of six units</u>) will get inside one of all available buildings inside a range (of 200m by default) from the marker center. Once inside the building, the group will stay there for a long time, and if there's enemy around, the group will fight from inside, doesn't leaving their covered position.
cswr_occupy_blu_1	Occupy destination used by Blufor groups assigned to use that. Vehicle is not possible.
cswr_occupy_opf_1	Occupy destination used by Opfor groups assigned to use that. Vehicle is not possible.
cswr_occupy_ind_1	Occupy destination used by Independent groups assigned to use that. Vehicle is not possible.
cswr_occupy_civ_1	Occupy destination used by Civilian groups assigned to use that. Vehicle is not possible.

## 1 / 2 - Including the destinations on Eden Editor:

On Eden Editor, drop an "Empty" marker on the map, rename it with one of those examples from the table above, and with *Copy & Paste*, add how many markers (destinations of that type) your mission asks because the numeral of the markers name will increase automatically:
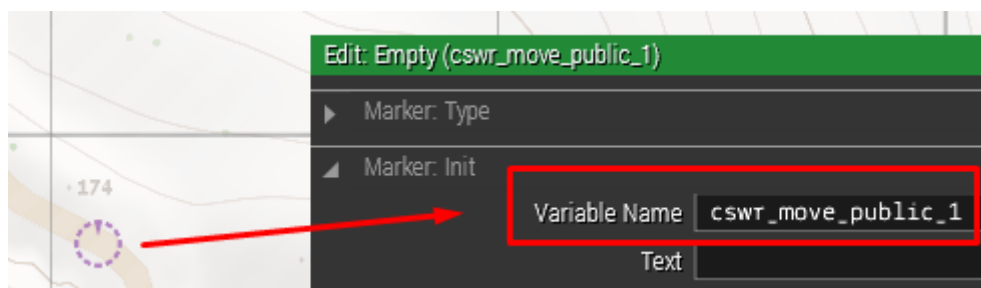
An example of destine marker and its attributes on Eden Editor.

To find in Eden Editor "Empty" marker, in the Assets menu, click on "Markers" (F6) and, after that, "System" on the category list. There, you will find out "Empty" marker. Drag and drop the marker where you want troops and vehicles going through. Soon you will understand each section of the marker's name structure.

A tip for you: use the Entities menu to organize what markers are spawn and what of them are destinations:
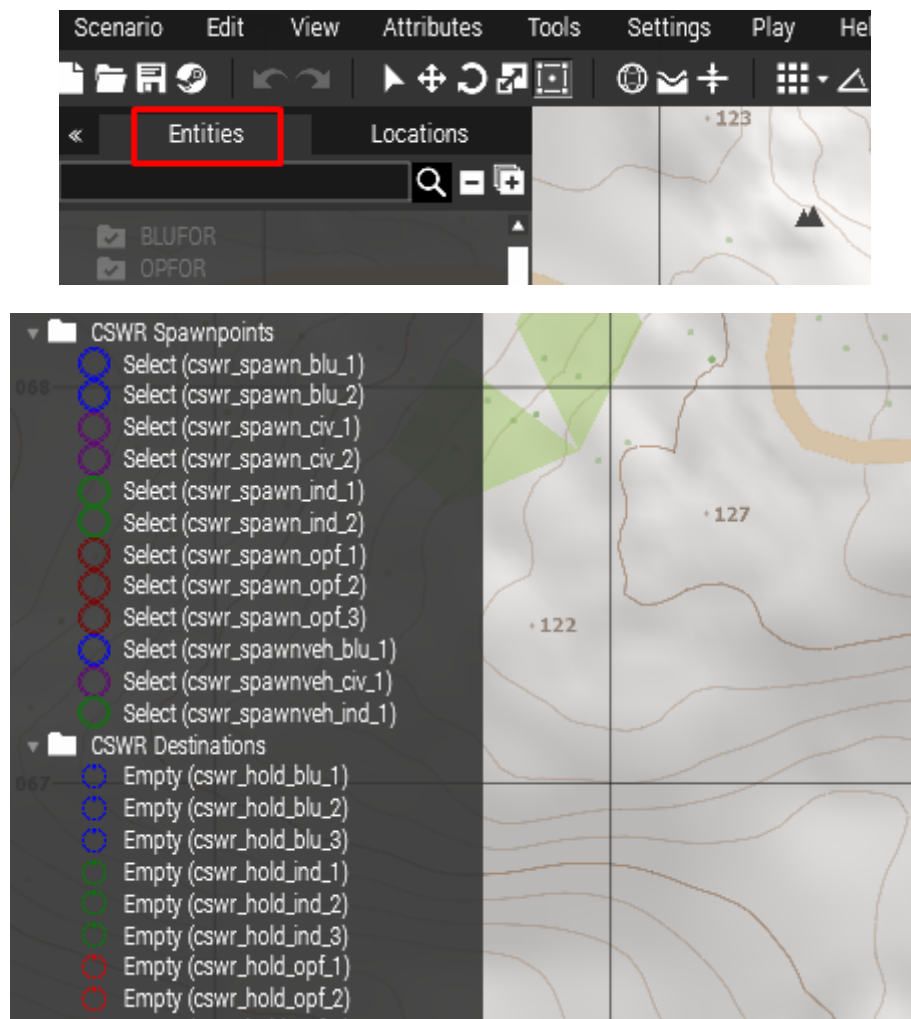
2 / 2 - Define where each spawned group will move:

Open the file: *fn_CSWR_population.sqf*
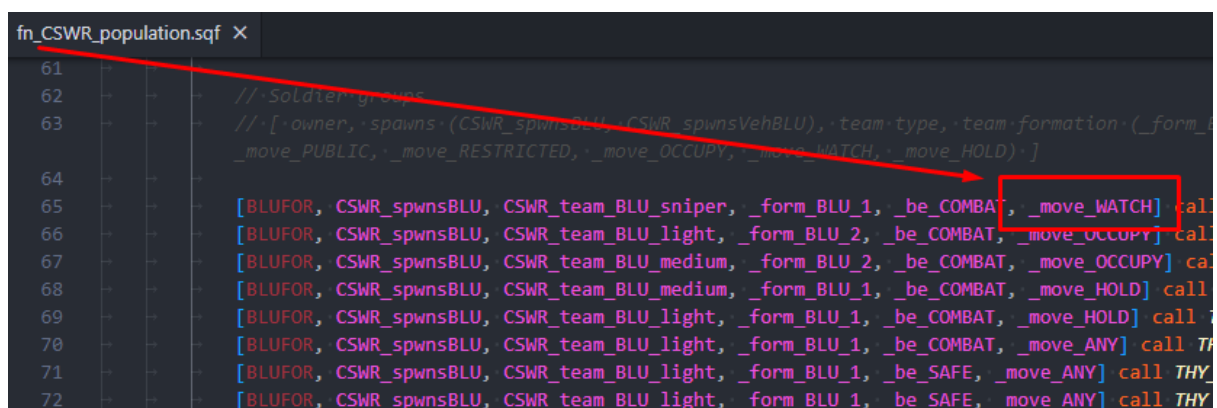
On image above, each line is a Blufor group of soldiers. In the last column, you define with type of destinations that group must be assigned. Down below, the options:

Destination on file:	Description:
_move_ANY	Group goes to any destination marker. (Highly recommended to be used by armed factions)
_move_PUBLIC	Group goes to where anyone can go. (Highly recommended to be used for civilian faction)
_move_RESTRICTED	Group goes only for Move destinations of their faction.
_move_OCCUPY	Group goes only for Occupy destinations of their faction. Cannot be used with vehicle.
_move_WATCH	Group goes only for one Watch destination of their faction. Cannot be used with vehicle.
_move_HOLD	Group goes only for Hold destinations of their faction.

Can the groups move free, with no destinations/waypoints?

No. In CSWR, the idea is the Editor has total control of the areas where the troops should move through or occupy or watch.

Define the factions sizes:

Now, let's request CSWR to spawn the faction teams already configured. In the *fn_CSWR_population.sqf* file, search the section "SPAWNING GROUPS: BLUFOR", for example:

1) Add or remove group's lines:

Each line represents a team/group that you wanna spawn right after the match starts. You will see the vehicle groups separated from the soldier's groups.

Change (or not) the team type in each line:

2) Increase or decrease the size of each team type:

Team of soldiers supports many types of soldiers in a single team, but is adviced follow more or less the same number of soldiers already configured. Feel free to customize the type of soldier you want to each team "template". Those green names

are "classnames" and they are unique. Each type of soldier of each faction has its own classname.

On Eden Editor, here is how you figure out what soldier classename or vehicle classname you want to, where the easiest way to copy the classname is right-clicking over the unit/vehicle and going to "Log", and "Log Classes". Done. Just Ctrl+V where you need
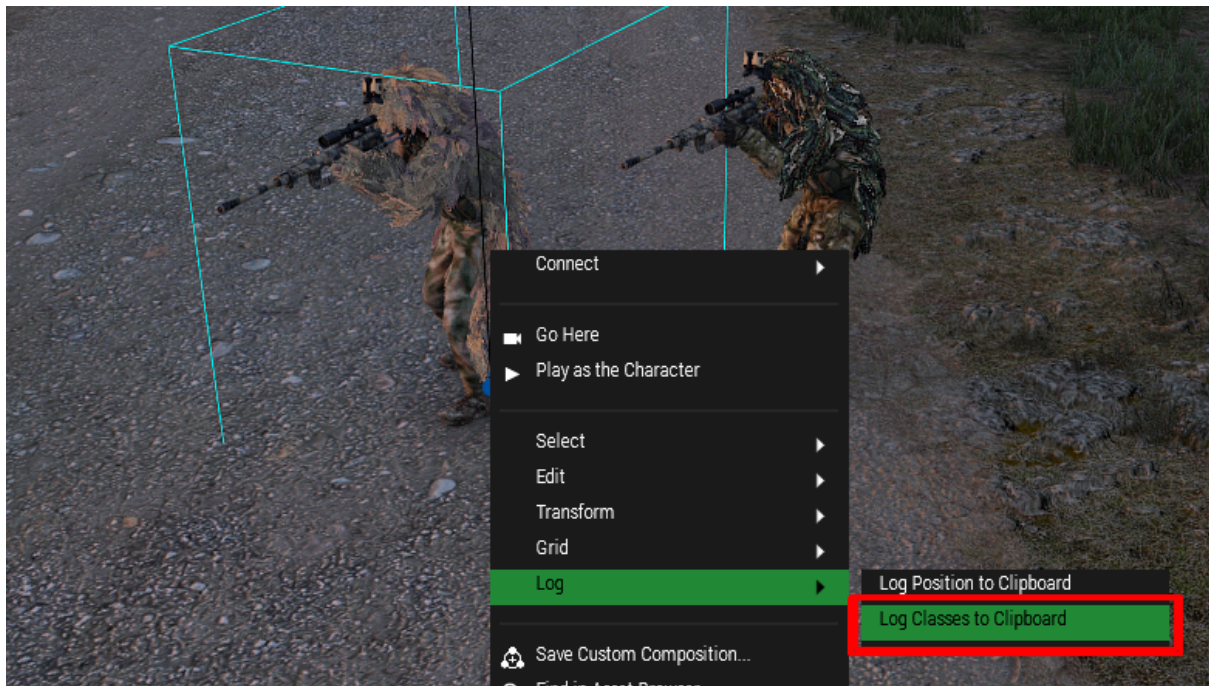
Also, you figure it out putting the mouse arrow over the unit/vehicle on Assets menu:
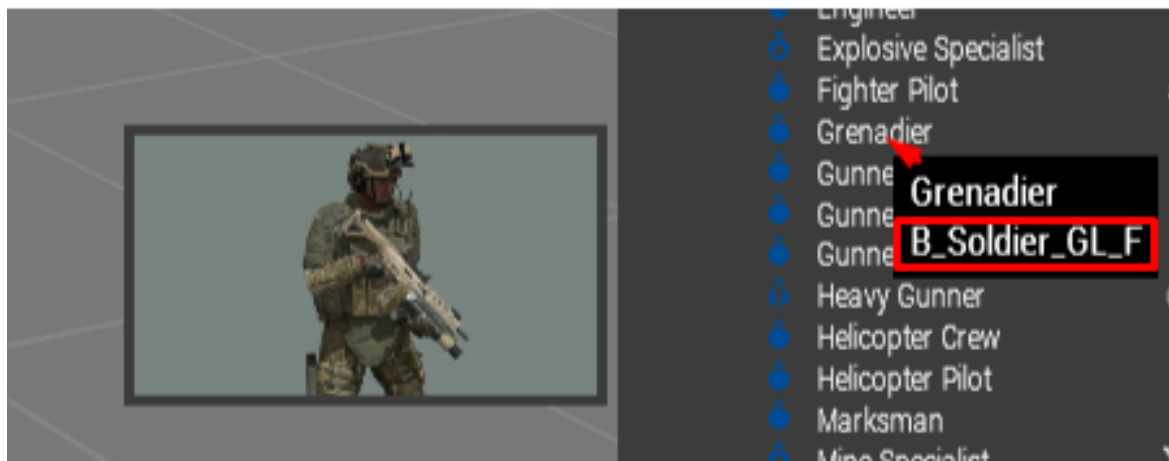
Important 1: you can use whatever loaded mod's units by the server. For example, if you wanna use RHS or CUP units in blufor, add the unit's classnames in the *fn_CSWR_population.sqf* file.

Important 2: Despite the vehicle's types being right below the title "Defining Groups", use only one vehicle's classname by vehicle type listed. Arma 3 doesn't work well with groups of vehicles, then CSWR has a code limiter that accepts just one vehicle per type.

Important 3: Never set a vehicle classname in a group of soldiers. CSWR is coded to ignore this kind of mistake.
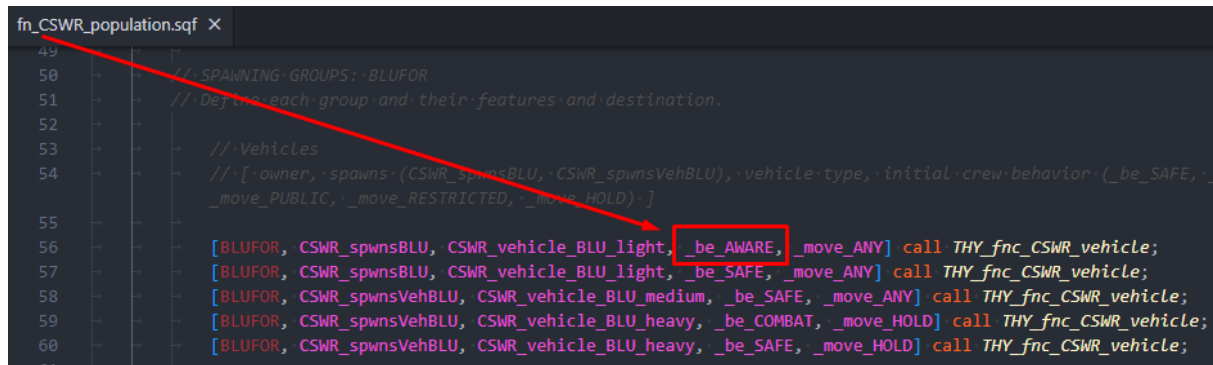
```
    // Soldiers groups
    CSWR_team_BLU_light    = ["B_Soldier_TL_F", "B_Soldier_F", "B_G_Offroad_01_armed_F"];
```

Arma 3 doesn't work well when a single group is composed of infantry and vehicles together.

Custom behavior for each group:

CSWR allows the Mission Editor to define the behavior of each team spawned through *fn_CSWR_population.sqf* file.

For example, go to "SPAWNING GROUPS: BLUFOR" section and check it out:

Above, each line represents a Blufor group that will spawn, and each group has its personality configured for all game long. Below are the options you might use for one or more groups, up to you:

Behavior:	Description:
_be_SAFE	Group walking with the guns low, looking around, and feeling safe. Vehicle rolling slow and on roads. If tank, the crew out into the hatch.
_be_AWARE	Group walking but with guns ready, looking around and concerned. Vehicle slow and on road, but concerned with the crew inside when tank.
_be_COMBAT	Group running, ready to fight and keep the formation. Vehicle running, ready to fight, leaving the roads.
_be_STEALTH	Group in combat mode, but much more in a cautious manner, moving always along the cover. Vehicle is in combat mode, turning the light off. If tank, it'll avoid knocking down trees.
_be_CHAOS	Group full speed, ready to fight and lose the formation. Vehicle full speed, rides everywhere, losing the formation.

How to customize the loadouts:

You can easily customize the infantry loadout, the crewmen loadout, and the sniper team loadout.

Open the file: *fn_CSWR_loadout.sqf*

```
fn_CSWR_loadout.sqf ×
1    // CSWR v4.0
2    // File: your_mission\CSWRandomizr\fn_CSWR_loadout.sq
3    // by thy (@aldolammeL)
4
5
6    // This function defines the faction loadout details
7    // Returns nothing.
8
9    params ["_faction", "_type", "_unit"];
10
11   switch (_faction) do {
12
13       case BLUFOR: {
14           // Exclusively for things to unlink and remov
15           _unit unlinkItem "NVGoggles";    // unli
16           _unit removeItem "NVGoggles";    // remov
17           //_unit removeItems "FirstAidKit";    //
18           _unit unlinkItem "ItemWatch";
19           _unit removeItem "ItemWatch";
20           _unit unlinkItem "ItemCompass";
21           _unit removeItem "ItemCompass";
22           _unit unlinkItem "ItemRadio";
23           _unit removeItem "ItemRadio";
24           _unit unlinkItem "ItemGPS";
25           _unit removeItem "ItemGPS";
26           _unit unlinkItem "ItemMap";
27           _unit removeItem "ItemMap";
28           _unit removeItem "16Rnd_9x21_Mag";
29           _unit removeItem "16Rnd_9x21_Mag";
30           _unit removeWeapon "Binocular";
31           _unit removeWeapon "hgun_P07_F";
32
33           // Exclusively for Helmet replacement [_unit,
34           [_unit, "H_Booniehat_tan", "H_HelmetSpecB
35
36           // Exclusively for Uniform replacement of inf
37           [_unit, "U_B_CTRG_3"] call THY_fnc_CSWR_L
38
39           // Exclusively for Uniform replacement of sni
             bipod", "binoculars"]:
40           [_type, _unit, "U_B_T_FullGhillie_tna_F",
             THY_fnc_CSWR_loadout_team_sniper;
41
42           // Exclusively for Vest replacement of infant
43           [_unit, "V_PlateCarrierL_CTRG", CSWR_isVe
44
45           // Exclusively for Backpack replacement of in
46           [_unit, "B_Kitbag_tan", CSWR_isBackpackFo
47
```

Keep in mind you are able to customize uniforms, vests, and backpacks and their contents.
Weaponry is a little more complicated, but we'll get to that in a moment.

For example, you can remove all Night Vision Goggles or GPS devices from each CSWR spawned Blufor unit only, if you want. Or just exchange the standard vest from all Opfor units, without losing all items inside the original vest. With CSWR you're allowed to customize all unit loadouts, even those ones spawned dynamically throught the CSWR script.

Crítical: about the weaponry, keep in mind if you change the primary weapon, for example, you will remove specialized weapons from specific soldier classes such as machine-gunners, marksmen, and crewmen, adding the same gun for everyone in the faction. If you want to use a specific weapon family for your custom army, try to use the classname's soldiers of the Arma 3 or mod armies that already use those weapons, and then customize their uniform, vest, and stuff.

Use loadout editing wisely, remembering that anything you add or remove will impact ALL units in that faction. Then open the *fn_CSWR_loadout.sqf* file and let's customize your army. Below, follow the logical steps for loadout customization for each enabled faction in-game:

1) Removing and unlinking items:

Here you will remove (and sometimes unlink and, after that, remove) items unnecessary for units in your mission.

```
//·Exclusively·for·things·to·unlink·and·remove:
    _unit·unlinkItem·"NVGoggles";·····//·unlink·the·night·vision
    _unit·removeItem·"NVGoggles";·····//·remove·the·night·vision
    //_unit·removeItems·"FirstAidKit";·····//·it·removes·all·(rem
    _unit·unlinkItem·"ItemWatch";
    _unit·removeItem·"ItemWatch";
    _unit·unlinkItem·"ItemCompass";
    _unit·removeItem·"ItemCompass";
    _unit·unlinkItem·"ItemRadio";
    _unit·removeItem·"ItemRadio";
    _unit·unlinkItem·"ItemGPS";
    _unit·removeItem·"ItemGPS";
    _unit·unlinkItem·"ItemMap";
    _unit·removeItem·"ItemMap";
    _unit·removeItem·"16Rnd_9x21_Mag";
    _unit·removeItem·"16Rnd_9x21_Mag";
    _unit·removeWeapon·"Binocular";
    _unit·removeWeapon·"hgun_P07_F";
```

For Arma 3, "Binocular" is a weapon and not an item, so be careful with the commands to remove things. Always test your customs, mainly when you're removing and adding things in unit inventories.

2) Customizing the helmet:

The mission editor can set two different helmets for each faction. One for infantry soldiers (first green classname below), and another for armored vehicles' crewmen (second green classname).

```
// Exclusively for Helmet replacement [_unit, regular helmet classname, heavy crew helmet cl
    [_unit, "H_Booniehat_tan", "H_HelmetSpecB_sand"] call THY_fnc_CSWR_helmetReplacement;
```

If you don't want to change the original helmet of the faction, just let those two green classnames as "" (empty). To set all infantry soldiers and crewmen with NO helmet, just set them as "REMOVED" for each one of the classnames.

3) Customizing the uniform, the vest, and the backpack:

In Arma 3, the uniform, vest, and backpack are items' containers for each soldier. If you set an item for a unit, if you check their inventory in-game, there will be the item, maybe inside the uniform, backpack, or vest. If the unit has no uniform, vest, or backpack, the unit won't be able to store the item. When you set a new vest for a faction, CSWR will scan all items inside the current vest, save them, change the vest to the new one, and, finally, transfer all original items to the new vest. The same happens when the uniform and backpack are replaced, for example, preserving the original unit weapons' magazines.

```
// Exclusively for Uniform replacement [_unit, uniform classname]:
    [_unit, "U_B_CTRG_3"] call THY_fnc_CSWR_uniformRepacker;  // ad
```

```
// Exclusively for Vest replacement [_unit, vest classname]:
    [_unit, "V_PlateCarrierL_CTRG"] call THY_fnc_CSWR_vestRepacker;
```

```
// Exclusively for Backpack replacement [_unit, backpack classname]:
    [_unit, "B_Kitbag_tan"] call THY_fnc_CSWR_backpackRepacker;  //
```

If you don't want to change the original containers of the faction, just let those green classnames as "" (empty). To set all units with NO backpack, or NO vest, or (for some reason, NO uniform, just set them as "REMOVED" for each one of the containers classnames.

Important: Notice that is not any soldier has a backpack or vest. CSWR will respect that logic but if you want to force to set every unit to get a backpack and/or a vest, you can do it through the file *fn_CSWR_management.sqf*, setting as true the options:

```
fn_CSWR_management.sqf  ×

1    // CSWR v4.0
2    // File: your_mission\CSWRandomizr\fn_CSWR_management.sqf
3    // by thy (@aldoLammel)
4
5    if (!isServer) exitWith {};
6
7    // PARAMETERS OF EDITOR'S OPTIONS:
8    // Debug:
9        CSWR_isOnDebugGlobal = true;      // true = shows basic d
10       CSWR_isOnDebugOccupy = false;     // true = if debug glo
11       CSWR_isOnDebugWatch = false;      // true = if debug glob
12       CSWR_isOnDebugHold = false;       // true = if debug globa
13   // Factions:
14       CSWR_isOnBLU = true;       // true = if you wanna spawn Bl
15       CSWR_isOnOPF = true;       // true = if you wanna spawn OpF
16       CSWR_isOnIND = true;       // true = if you wanna spawn Ind
17       CSWR_isOnCIV = true;       // true = if you wanna spawn Civ
18   // Others:
19       CSWR_isBackpackForAll = false;    // true = if editor se
20       CSWR_isVestForAll = false;        // true = if editor se
21       CSWR_isHoldVehLightsOff = false;  // true = all vehicle
22       CSWR_isUnlimitedFuel = false;     // WIP
23       CSWR_isUnlimitedAmmo = false;     // WIP
24       CSWR_isEditableByZeus = true;     // true = CSWR units a
25       CSWR_wait = 1;                    // If you need to make
26
```

4) Customize your sniper teams, including their main rifle:

Snipers teams might be customized separately. As the image down below, you can change the sniper team's uniform, vest, rifle, its magazine type, optics, supressor, binoculars and rifles attachments.


```
fn_CSWR_loadout.sqf  ×

39    // Exclusively for Uniform replacement of sniper team [_type, _unit, "uniform", "vest", "rifle", "rifle magazine", "rifle sight/optics", "rifle rail", "
      b(pod , binoculars ];
40    [_type, _unit, "U_B_T_FullGhillie_tna_F", "", "srifle_EBR_F", "20Rnd_762x51_Mag", "optic_DMS", "acc_pointer_IR", "muzzle_snds_B", "", "Rangefinder"]
      THY_fnc_CSWR_Loadout_team_sniper;
41
```

If you don't want to change the original stuff of sniper team, just let those green classnames as "" (empty). Except rifle and binoculars, for you remove one or more weapon attachments, just set each one as "REMOVED".

5) Adding and linking items:

To finish, the last section of loadout customization is the area to add things. No doubt, this is the section that I use the least in my customizations. Generally, I just remove stuff from units, but when customizing the civilian faction for example, I love to add the cellphone item to each unit just for fun. Be aware for some items like GPS that is important to "addItem" first and, right after "linkItem" too. Otherwise, if you just add the GPS, the item will be in the unit's inventory but not in use.

```
// Exclusively for things to add or link:
    _unit addItem "arifle_MXM_Hamr_pointer_F";  // create th
    _unit linkItem "arifle_MXM_Hamr_pointer_F";  // assign th
    _unit addItem "FirstAidKit";  // create just one bandage
    _unit addItem "FirstAidKit";  // create another bandage
    //_unit addItem "ItemGPS";  // create item to unit inven
    //_unit linkItem "ItemGPS";  // assign the  item to the
```

Critical: about adding lots of things, always take care not to exceed the load limit of the chosen uniform, vest, and backpack. If no more space in their inventory, items start to disappear.

Important: if something is wrong in your loadout changing tests or you want to learn how to see the original unit loadout code, check this out.

Fixing: vehicles blowing up at the mission start

Different from soldiers, vehicles need a big empty space on the map to spawn safe, with no collisions. So, if it happens yet, make sure the faction spawnpoints are using them in clear and flat ground, for example, over a road or in an empty field. Urban streets can be a challenge for vehicles, resulting in explosions.

Important 1: the more spawnpoints available, the fewer accidents such as infantry being run over and vehicles colliding.

Important 2: **NEVER** set a spawnpoint out of the map limits. Arma 3 no recognize positions beyond the map edges.

Fixing: trying to edit the unit's loadout

If you are facing a hard time editing your unit's loadout, maybe you are trying to remove a thing that doesn't exist or calling weird commands. Let's investigate:

1) On Eden Editor, drag and drop on map one unit of the original faction you are trying to make changes;
2) After that, go to unit Attributes and click "Edit Loadout" > "BI Virtual Arsenal";
3) Now, just click on "Export" button;

4) Open your Notepad and CTRL+V;

5) Now, check carefully if you are editing the same items the original unit brings. Keep reading:

An item does not want to leave:

In the example below, I've tried to remove the NVG from my units but somehow I couldn't. So I checked the unit exporting their attributes and I realized that the BLUFOR unit was originally using the INDEPENDENT NVG.

Original attributes from *Blufor B_W_Soldier_AAT_F* unit:

```
this addWeapon "Rangefinder";

comment "Add items to containers";
this addItemToUniform "FirstAidKit";
for "_i" from 1 to 2 do {this addItemToUniform
"30Rnd_65x39_caseless_black_mag";};
for "_i" from 1 to 5 do {this addItemToVest "30Rnd_65x39_caseless_black_mag";
};
for "_i" from 1 to 2 do {this addItemToVest "16Rnd_9x21_Mag";};
for "_i" from 1 to 2 do {this addItemToVest "HandGrenade";};
for "_i" from 1 to 2 do {this addItemToVest "B_IR_Grenade";};
this addItemToVest "SmokeShell";
this addItemToVest "SmokeShellGreen";
for "_i" from 1 to 2 do {this addItemToVest "Chemlight_green";};
for "_i" from 1 to 2 do {this addItemToBackpack "Titan_AT";};
for "_i" from 1 to 2 do {this addItemToBackpack "Titan_AP";};
this addHeadgear "H_HelmetB_light_wdl";
this addGoggles "G_Tactical_Black";

comment "Add items";
this linkItem "ItemMap";
this linkItem "ItemCompass";
this linkItem "ItemWatch";
this linkIte_
this linkIte_ "NVGoggles_INDEP";

comment "Set identity";
[this,"WhiteHead_11","male05eng"] call BIS_fnc_setIdentity;
```

Then the issue has been solved in *fn_CSWR_globalFunctions.sqf* file:

```
#~~_unit unlinkItem "NVGoggles";~~
_unit unlinkItem "NVGoggles_INDEP";
```

How to contribute to the CSWR script:

Discussion on Bohemia Forums:

https://forums.bohemia.net/forums/topic/237504-release-controlled-spawn-and-waypoints-randomizr/

Changelog on GitHub:

https://github.com/aldolammel/Arma-3-Controlled-Spawn-And-Waypoints-Randomizr-Script#readme

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