



## **Gone Native's Civilians      Reference sheet:**

*A populated Sahrani or United Sahrani, with four fully functional bus lines and many civilian cars.*

### **Introduction:**

Gone Native's Civilians is not Sahrani Life nor City Life. Also you should not expect the behavior found in role playing games.

It will just add civilians to a missions on Sahrani. These civilians will slowly walk in their designated area and panic if somebody shoots on them or if they are confronted with a dead civilian.

As described in the Quick Start, this Gone Native (GNV) set of functions uses to populate the island of Sahrani ColonelSandersLite "CSL *Populate island*" suite of scripts.

You can download these at <http://www.armaholic.com/page.php?id=653>. It seem to be removed at other download locations like OFPEC and ArmedAssault.info.

GNV Civilian's functions always exist in a variety that will perform an action on the north of Sahrani, these functions start with: `GNV_N_` and a function that will perform the same action on the south of Sahrani, starting with `GNV_S_`

This separation is done for performance because most missions either have their scenario in just a part of the south or just a part of the north of Sahrani. So mostly there is no need to populate the whole island with civilian activities. But if desired that can be done.

Because GNV Civilian's offers the opportunity to fill the island of Sahrani with hundreds of civilians and many vehicles, it is advised to check with 'Fraps' or any other frame rate indicator how much the functions, one is using, affect the performance of the mission.

A further separation has been made into creation of different type of characters or vehicles:

1. A function that populates that part of the island with civilians;
2. A function that creates two bus lines;
3. A function that creates moving civilian vehicles;
4. A function that creates empty civilian vehicles;
5. A function that creates a few moving and some empty civilian boats.

To ensure replay-ability the functions use "random" where it is possible. All occupants of the busses and cars, driver and passengers are created of a random civilian type and placed in random numbers with random seating within the vehicles.

All civilian vehicles will mostly travel at normal speeds, but sometimes randomly choose for full speed. On 'sensitive' locations where traffic accidents can occur, limited will be the speed of choice.

The naming convention is quite straightforward. The groups are always local in the function, but the vehicle and occupants names are always global.

It works like "CV01", where CV stand for Civilian Vehicle. There are some varieties, like CVR, Civilian Vehicle Random, CVE, Civilian Vehicle Empty or CB Civilian Boat. CV01\_1 is the vehicle, CV01\_2 is always the driver and CV01\_3 is the first possible passenger.

## 1 Populate Sahrani with civilians:

Functions:

```
execVM [x] "GNV_Civilians\GNV_N_Populate.sqf";  
execVM [x] "GNV_Civilians\GNV_S_Populate.sqf";
```

Where the parameter *x* is a number, default is 5. It is the fill factor that will determine how many civilians will be created.

This function creates civilians at predetermined locations, using the "*CSL populate island*" scripts. The predetermined locations are farms, hamlets, small villages. For the function that populates the south also Schnell gas stations have some civilians humming around. Some industrial estates have also civilians on their premises. Generally speaking one will not find GNV civilians in military installations, to not interfere with game play of the mission itself

On purpose towns like Paraiso, Bagango, Corazol, Ortego and Dolores are only filled with 20 to 30 civilians (if the fill factor is 5). That is a design choice and a performance issue. If one would fill these cities with a realistic amount of civilians it should be many more.

The "*CSL populate island*" script suite has a "performance safety" feature allowing the creation of a maximum of 710 civilians. (You can disable this feature on line 138 in *CSL\_PopulateIsland.sqf*) With a fill factor of '5' around 240 civilians are created on the north of the island. And around 350 civilians will be created by the function covering the south of Sahrani.

If a mission maker likes to add some extra civilians at distinct places this is easy:

Just call

```
[somePos, x, y, i] execVM "CSL_PopulateIsland\CSL_PopulateIsland.sqf";
```

Where *somePos* is the location, *x* is the horizontal size of the area, and *y* vertical size of the area, and *i* the number of civilians to be created in that area.

Example:

```
[GetMarkerPos "Here",200,100,20] execVM "CSL_PopulateIsland\CSL_PopulateIsland.sqf";
```

This creates 20 civilians in a 200 x 100 square area at the location of marker "Here".

*Tip:*

With some small changes "*CSL populate island*" can also be used to populate the island with armed civilians, insurgents or any other type of soldiers.

Just locate the *CSL\_PopulateIsland.sqf* function in the *CSL\_PopulateIsland* folder.

Open it and look for the array of *\_CivilianTypes*. Change the entries in this array to the characters that this function should create, something like 'SoldierEB' etc...

Don't forget to change the below the array standing *\_numberOfTypes* accordingly.

Then open *CSL\_PopulateIslandB.sqf* and locate the line

```
_group = createGroup civilian;
```

usually found around line 170.

Change 'civilian' to the side you desire them to be: east, west or resistance.

A few lines lower –line 180-, you can change their behavior and combat mode from "WHITE" and "SAFE" to –let's say- "RED" and "AWARE".

The civilians will prefer to walk in the middle of the road. This will hamper civilian vehicles traveling on that road. But it is important to understand that these civilians only exist in a 550 (ArmA) meter radius among human players. So if there is no human player present, the civilians in a certain location will not intervene with traffic because they simply don't exist at that moment. As soon as a human player comes near, they will be created. I call this a "bubble" of AI civilians around a human player. (Actually a lot of modern games work this way to create an impression of being into a living world.)

Don't bother about civilians that are killed, they will be removed by the script after a while. But no fresh ones will spawn. Death is death. If every civilian in a village is killed the village will stay empty.

**Note that in a single player mission you have to place at least one civilian in the mission editor on the map, for these functions to work.** That might be everywhere and be any civilian.

## 2 The buslines:

Functions:

```
execVM [] "GNV_Civilians\GNV_N_Busses_Create.sqf";
execVM [] "GNV_Civilians\GNV_S_Busses_Create.sqf";
```

The first function will create two buslines on the north of Sahrani:

- **Everon**; Bajo Valor; Gaula; Corazol (center); Corazol (north); road to Modesta; road to Mercalillo; Obregan; road to Passo San Marco; **Bagango** (south); Bagango(center); Bagango (west); Bagango (mining area); Carmen; **Eponia** and vice versa.
- **Pita**; Masbete (north); Masbete (west); Benoma; road to Passo San Marco; **Bagango** (south); Bagango (center); Mercalillo; Tlaloc; Pacamac; **Hunapu** and vice versa.

The second function will create two buslines in the south of Sahrani:

- **Cedras**; Ambergris; Balmopan; Chantico; Somato; Yoro; **Paraiso** (west); Paraiso (north); road to Rashidah; Gasoline station; **Corazol** (south) and vice versa.
- **Somato**; Gulan; Cayo; road to Tiberia; **Iguana**; Parato; Dolores (south); Dolores (center); Ortego (south); Ortego (north); **Corazol** (south) and vice versa.

The bus will be filled with up to six passengers and a driver. All will be of the civilian type, chosen randomly and seated randomly. Default the bus will stop at least 10 (ArmA) seconds at a bus stop, up to 14 seconds maximum.

These stop times are determined by the variables `_minWaiting`, `_maxWaiting`. If desired you can change these values. You can find them in the first lines of the `.sqf`'s

These busses cover every bus stop on the map. If a player stands at a bus stop, information will be shown by a marker on the map of the actual location of the bus. The text of the marker will be an indication of the direction in which the bus is traveling. I.e. "*Bus Everon-Bagango-Eponia vv.*" means that the bus is traveling from Everon to Eponia, whereas "*Bus Eponia-Bagango-Everon vv.*" is an indication that the bus is traveling from Eponia back to Everon.

Note that there is no bus connection between Corazol South and Corazol Centre (The South and the North). This part has some overpass junctions and semi-barriers which proves difficult terrain for the AI to travel. Another tricky part are the bridges at Dolores of whom one bus line has to negotiate two bridges, because there are two bus stops in Dolores. At difficult parts the bus driver will drive with speed mode "limited", but on normal stretches they will mostly drive on "normal" speed, but randomly choose to drive to the next waypoint at "full" speed.

In case you want to remove the busses and its occupants from the map, there are also two functions:

```
execVM [] "GNV_Civilians\GNV_N_Busses_Remove.sqf";
execVM [] "GNV_Civilians\GNV_S_Busses_Remove.sqf";
```

Bus Everon-Bagango-Eponia has the name CV01\_1, the driver is CV01\_2, and the possible occupants are CV01\_3 to CV01\_8.

Bus Pita-Bagango-Hunapu has the name CV03\_1, the driver is CV03\_2, and the possible occupants are CV03\_3 to CV03\_8.

Bus Cedras-Paraiso-Corazol has the name CV02\_1, the driver is CV02\_2, and the possible occupants are CV02\_3 to CV02\_8.

Bus Somato-Iguana-Corazol has the name CV04\_1, the driver is CV04\_2, and the possible occupants are CV04\_3 to CV04\_8.

An example: You can create a trigger that removes bus CV01, when it calls at the last stop in Everon after 24:00 hour (midnight). If the bus fails to show up in Everon (probably it had some accident), you remove it anyway at 02:00 hour. At 05:00 o'clock you create a fresh morning bus line. This method is used in the "Gone Native's Civilians Demo-Mission"/ "Public\_Transport". Also you can create a trigger that checks if the bus is still ok, and removes it after a while when it is destroyed and creates a fresh bus line. You can check an example in the same mission near Cedras for bus line 2 and 4.

### 3 Moving cars:

Functions for fixed type of cars:

```
execVM [] "GNV_Civilians\GNV_N_MovingCars_Create.sqf";
execVM [] "GNV_Civilians\GNV_S_MovingCars_Create.sqf";
```

Functions for random type of cars:

```
execVM [] "GNV_Civilians\GNV_N_MovingCars_Create_Random.sqf";
execVM [] "GNV_Civilians\GNV_S_MovingCars_Create_Random.sqf";
```

Each of these functions creates 9 moving civilian cars on their part of Sahrani, most of these cars travel at predetermined routes, but one or two travel more open routes, using placement radius for waypoints. Last ones are more intended for off road vehicles. From the north only one vehicle is traveling to the south, passing Corazol and back. From the south no vehicles are traveling to the north. The overpass junctions and semi-barriers in the split city of Corazol are difficult for the AI to negotiate a route.

The function for the fixed type of cars, takes into consideration to match location and purpose with type of cars. So on an agricultural farm in the south a tractor is busy. In the deep north of Sahrani, where there seems to be only military bases and logging activity, a civilian truck is going about with lumberjacks. The random function just picks civilian cars randomly. This means that a bus can be created doing an off road route or a tractor doing a long intercity route. But that can be interesting and funny. Plain ArmA civilian cars are used, default the TT650 motor and civilian HMMVV are not used, but you can change the type of vehicle or array of type of vehicle –in case of the random function- to what you like. Mostly the car driver will drive with speed mode "normal", but randomly choose to drive to the next waypoint at "full" speed. On a few points sensitive for traffic incidents they will drive at limited speed.

if you would like to create 5 series of 9 random civilian cars created with 120 (Arma) seconds in between in the south of Sahrani, you can program a loop like:

```
_i = 1
while { _i < 6 } do
{
_res = execVM [] "GNV_Civilians\GNV_S_Cars_Create_Random.sqf";
_i = _i + 1
sleep 120;
};
```

In case you want to remove the cars and its occupants from the map, there are also two functions:

```
execVM [] "GNV_Civilians\GNV_N_MovingCars_Remove.sqf";
execVM [] "GNV_Civilians\GNV_S_MovingCars_Remove.sqf";
```

- Fixed type cars in the north of the Sahrani have odd numbers: CV05\_1, CV07\_1 etc.. up to CV21\_1.  
Their drivers are CV05\_2, CV07\_2 etc... Possible passengers will be CV05\_3, CV07\_3 etc..
- Fixed type cars in the south of the Sahrani have even numbers: CV06\_1, CV08\_1 etc.. up to CV22\_1.  
Their drivers are CV06\_2, CV08\_2 etc... Possible passengers will be CV06\_3, CV08\_3 etc..
- First random series cars in the north of the Sahrani have odd numbers: CVR05\_1, CVR07\_1 etc.. up to CVR21\_1.  
Their drivers are CVR05\_2, CVR07\_2 etc... Possible passengers will be CVR05\_3, CVR07\_3 etc..
- Random cars in the south of the Sahrani have even numbers: CVR06\_1, CVR08\_1 etc.. up to CVR22\_1.  
Their drivers are CVR06\_2, CVR08\_2 etc... Possible passengers will be CVR06\_3, CVR08\_3 etc..

- *In case of more random series cars are created ArmA will add a '1' to the name, so CVR05\_11, following series will be CVR05\_111 etc...*

The function that creates a fixed type of car, will fill it with a variable maximum amount of passengers, because a truck can hold up to 14 passengers, whereas a tractor holds no passengers at all.

The function that creates a random type of car sometimes adds one passenger. but only one, because most pick-ups, like the civilian Hilux and the Datsun only hold one passenger.

Note that the first fixed vehicles in North and South, so CV05\_1 and CV06\_1 are police cars filled with a few –blue beret- “OfficerG” types, operating on the civilian side, but armed with pistols.

#### 4 Empty cars:

Functions for fixed type of empty cars:

```
execVM [x,y] "GNV_Civilians\GNV_N_EmptyCars_Create.sqf";
execVM [x,y] "GNV_Civilians\GNV_S_EmptyCars_Create.sqf";
```

Functions for random type of empty cars:

```
execVM [x,y] "GNV_Civilians\GNV_N_EmptyCars_Create_Random.sqf";
execVM [x,y] "GNV_Civilians\GNV_S_EmptyCars_Create_Random.sqf";
```

Where the parameter *x* is the chance of the empty civilian vehicle being locked, and *y* is the chance how filled with fuel the fuel tank actually is. Default value for *x* is 4, which means that there will be a 25% chance of the vehicle being locked and the default value for *y* is 1 which means that there is a normal chance that the `setFuel` will be somewhere between 0.0 and 1.0.

*x* is part of the statement:

```
if ((random x) < 1) then { empty_vehicle lock true;};
```

*y* is part of the statement:

```
empty_vehicle setFuel (random y);
```

So if you want all empty vehicles to be locked, make *x* lower than 1. If you want them all to be unlocked make *x* a high number, something like 100.

If you want the empty vehicles to have almost no fuel, lower the *y*. If *y* is 0.1 the fuel level will be somewhere between 0.0 and 0.1 of the total capacity. That's not much.

The function that creates a fixed type of car takes into account the location of placement. So a tractor will be placed near a farm. An empty bus will be placed near a bus station. A delivery vehicle or truck can be found at industrial estates. Off road vehicles like the Hilux and Datsun will be more found in the countryside than in the cities.

The random variety of the function just places random car, so an empty bus can end up on the premises of an isolated farm.

Note that the fixed and random functions just place cars at the same fixed locations at the map, so it is advisable to use the function just once and choose either the fixed vehicle type or the random vehicle type.

Just as the other functions there is also a set of functions to remove these empty vehicles:

```
execVM [] "GNV_Civilians\GNV_N_EmptyCars_Remove.sqf";
execVM [] "GNV_Civilians\GNV_S_EmptyCars_Remove.sqf";
```

Note that the vehicles in the north have the names CVE00 up to CVE49, whereas the empty vehicles created in the south have the names CVE50 up to CVE99.

## 5 Boats, (Unfortunately at present only inflatable's):

Functions for creating some boats:

```
execVM [] "GNV_Civilians\GNV_N_Boats_Create.sqf";  
execVM [] "GNV_Civilians\GNV_S_Boats_Create.sqf";
```

These functions will create a mix of mostly empty and some moving boats, on either the south or the north of Sahrani. Due to the fact that the only small boats –at present- available are inflatable's, these will be CRRZC Zodiac's in the south and PBX in the north.

Near most jetties one will find some kind of empty inflatable, offering the opportunity to travel to the small islands around Sahrani. On the Playa on the west coast some guys are using the Zodiac just for beach fun. From the beach resort of Arcadia one boat is going to the island of Rahmadi and back. It is a more than four 'clicks' (i.e. ArmA kilometers) travel, but if desired one can hop on for a ride.

On the North of Sahrani a guy is ferrying a boat from Hunapu to Isla del Vida and back.

Furthermore a boat is traveling from Corazol to the Isla de Libertad (that has been extended with two hotels on United Sahrani).

From the small bay south of the Roca del Dror a boat is also going to the island of Antigua.

There are also two functions to remove these boats:

```
execVM [] "GNV_Civilians\GNV_N_Boats_Remove.sqf";  
execVM [] "GNV_Civilians\GNV_S_Boats_Remove.sqf";
```

## 6 Multiplayer issues:

This function suite has been tested for multiplayer on a client-functioning-as-server situation, not with a dedicated server. **In multiplayer it is strongly advised to place a GameLogic vehicle on the map in your mission editor, and name it 'server'**. This was quite common in OFP (and ArmA) because it offers the opportunity to check whether a computer is the server with the famous line of code:

```
if (local server) then {};
```

an example of the use of this code can be found in

```
"GNV_Civilians\GNV_Populate_North.sqf";  
"GNV_Civilians\GNV_Populate_South.sqf";
```

If you don't use `if (local server) then {};` all moving vehicles will be created on all clients. So if a mission is played with three players, and you want to have bus lines in the north, there will be three busses driving in convoy on every bus line.

The functions that populate the island with 'plain' civilians i.e.

:

```
execVM [x] "GNV_Civilians\GNV_N_Populate.sqf";  
execVM [x] "GNV_Civilians\GNV_S_Populate.sqf";
```

have different multiplayer behavior. They create a 550 (ArMA) meters "bubble" of AI civilians around a human player. In multiplayer each human player has its own bubble. So if two human players are together in a hamlet that normally should have 5 AI civilians walking around, there will be (2x5) 10 AI civilians walking around. As soon as one human player leaves the village, this will go back to 5 AI civilians.

It's just that I didn't want to change ColonelSandersLite populate island script suite and also don't know if this behavior is good or bad in a multiplayer situation where so many AI civilians are running around. If everybody has its own "bubble" it might be the best solution. Also because outside of the "bubble" the AI civilians are 'stored', which is in reality just a 'deleteVehicle' statement. So outside the "bubble" they are really removed.

I think that this will work nicely for multiplayer missions with only a few human players, but works badly for multiplayer missions with a lot of human players.

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