**GENERAL RESOURCE ALLOCATION ALGORITHM**

INPUT:

* N(A) areas, each with a given Pden, vegetation, terrain and altitude
* N(R) SRUs, each with given speed and sweep width, and correction factors for vegetation, terrain and altitude

ALGORITHM:

Create a list of areas

For each area in turn:

{

Create a list of SRUs for that area and calculate Effective Sweeping Rate = Speed \* Sweep Width for each (taking correction factors for that area into account)

Sort the list of SRUs into descending order by Effective Sweeping Rate

Calculate PSR = Pden \* Effective Sweeping Rate for the SRU at the top of the area’s list.

}

Sort the areas into descending order by PSR values

Let maxPSR be the largest of the PSR values for the areas.

Let PSR2 be the second highest PSR value for the areas.

While (there are SRUs remaining in the lists)

{

Let MAXGROUP be the set of areas at the front of the areas list with equal highest PSR value.

For each area in MAXGROUP, allocate resource hours for the SRU at the top of its list in such a way that the PSR values for all areas in MAXGROUP are driven down equally. Stop driving the PSR down when either:

* One of the SRUs being used runs out of resource hours. Delete this SRU from the list for every area. Every area that previously had this SRU at the top of its list now has a new SRU at the top of its list. Recalculate PSR for all such areas and move them into their correct position in the list of areas (which is sorted by PSR). MaxPSR remains the same. MAXGROUP and PSR2 need to be recalculated.
* The PSR for all areas in MAXGROUP is driven down to PSR2 (we will now add further areas to MAXGROUP in the next iteration). MaxPSR is equal to the previous PSR2. MAXGROUP and PSR2 must be recalculated.

}

NOTE:

Pden values for each area must be continually updated during this process.