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### Table 1

We determined three types of multilayer networks most relevant to spatial variables. Multilayer networks with layers defined by spatially explicit locations, interspecific interactions, and community or subpopulation structure. Other types of networks, such as intercontexual networks or temporal networks, are likely only to incorporate spatial variables in a hybrid multilayer network and considerations for including those variables will be explored here

In table 1, we define three types of multilayer networks that *can* incorporate spatial variables.

Multilayer networks are composed of layers, nodes, interlayer edges and intralayer edges. Layers are

How are layers defined, nodes defined, inter layer edges

We list variables affected by spatial and social scale

We use a definition of spatial scale from LE,

social scale is

TODO: find pictures of ML nets to include

|  |  |  |  |
| --- | --- | --- | --- |
|  | Spatial network | Network of networks | Interspecific network |
| Layer | Spatially explicit patches, areas, landcovers | Subpopulations, fuzzy patches | Different species |
| Entities | Individuals | Individuals | Individuals |
| Nodes | Individual | Individuals and sub-networks | Individuals and species-specific networks |
| Interlayer edges | Connect individuals to themselves | Connect networks to networks | Connect species to species |
| Intralayer edges | Association to other individuals within network | Association to other individuals within network | Association to other individuals within network |
| Social grain | types of interaction, chain rule, spatsoc threshold, hyena sessions | For intra: see left. For inter: similarity, vulnerability |  |
| Spatial grain | resolution |  | connectivity, clusters |
| Image md |  |  |  |