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**The concept of the Intensity Parameter  
in the Intensity Scales**

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# The concept of the Intensity parameter in the Intensity scales

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Information on earthquakes are recorded in the historical documents since some centuries BC. Without seismological instruments, the only tool for the intensity assessment was the information on effects triggered by the earthquake itself.

After some pioneristic attempts to classify seismic events (Gastaldi, 1564; Schiantarelli, 1783), modern macroseismic intensity scales have been developed and formally defined at the end of the XIX century as an empirical tool for measuring the strength of an earthquake, and deriving information on several physical characteristic of a seismic events (source parameters, attenuation, and site effects).

Intensity scales are based on the effects of the earthquake on humans (most important indicators of intensity up to V), on man-made structures and on the environment (indicators of intensity between VI and XII).

A careful review of most important intensity scales used worldwide, such as the RF 10 degrees scale, the MCS, MM and MSK 12 degrees scales and also the 7 degree JMA scale, shows that effects on natural environment must be taken in account for the evaluation of intensity.

Vice versa, assessment of “intensity” that is not based on the combined and comprehensive evaluation of effects on humans, human environment and nature, is simply assessment of something different from the macroseismic intensity as formally defined in the original scales. Some examples will show more insights on this point.

Therefore, scales that do not use environmental effects cannot be defined as intensity scales.

**TO BE DEVELOPED**