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R. Daniel Mauldin* (mauldin@unt.edu), Mathematics Department, University of North Texas, Box 311430, Denton, TX 76203, and **Alexander P. McLinden**. *Random Closed Sets Viewed As Random Recursions*.

It is known that the box dimension of a Martin-Lof random closed set in $\{0, 1\}^N$ is $d = \log_2(\frac{4}{3})$. We show how the developed theory of random recursive constructions may be applied to obtain the fact that the d -dimensional Hausdorff measure of such a set is 0 and find the exact Hausdorff dimension function: A Martin-Lof random set has positive and finite measure with respect to the Hausdorff measure, H^g , where $g(t) = t^d(|\log|\log(t)||)^{d - \frac{\log 4}{\log 3}}$. We show how this theory may be applied to general random closed sets including those where dying is allowing. (Received September 11, 2008)