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The 3V rule to efficiently and holistically address the One health vision in territories

Based on an empirico-inductive approach¹ we observed that the One health-diet relationship is governed by three inclusive and interconnected dimensions^{2,3}: the degree of food processing (i.e., the Vrai/Real food metric), the plant/animal-based food ratio (i.e., the Végétal/vegetal food metric), and the food diversity (the Varié/varied food metric). We then reach a global optimum threshold of around 15% ultra-processed and animal food calories daily⁴, which allows addressing all nutritional needs in children, adult and elderly populations⁴⁻⁶. While the Real metric addresses the food matrix effect (that governs the metabolic and health effects of nutrients⁷), the Vegetal and Varied metrics address the food composition at the level of diet. Otherwise, within the agro-food chain, producers are first suppliers of nutrients to the populations (through the Vegetal and Varied metrics), and the food industry propose either Real or ultra-processed food to the consumers. Of the three metrics, the Real one is therefore the most important to supply healthy nutrients to the human organism; and the preservation of the food matrix appears as a key concept for contributing to the One health approach⁷.

Therefore, the 3V rule constitutes a simple, ethical and holistic framework to guide food policy, public health, and food system sustainability through proposing reducing ultra-processed and animal-based foods while improving food diversity. It is used today in two French territorial food plans at local level as a basis for improving human health (i.e., increasing the healthy life years) and food system sustainability. We have also calculated in French supermarkets that a 3V-based shopping cart is 5% less expensive than a standard shopping cart containing 62% ultra-processed calories and 41% animal calories, i.e., far from sustainability⁸. Finally, we also observed in France⁹ and China¹⁰ that the more the population moves away from the 3V rule, the higher the prevalence of chronic diseases. Thus, the top-down and holistic approach of the 3V rule allows avoiding addressing the One health vision with a siloed reductionist vision.

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