



# CARBON FOOTPRINT OF FAIR TRADE HANDICRAFT

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Magasins du monde

*Mega-fires, heat waves, floods, droughts, etc.: catastrophic events linked to climate change are becoming the new normal. For example, June 2022 was the third hottest June on record worldwide, according to data from the European climate change service Copernicus. June 2019 and 2021 are ahead of it in the rankings<sup>1</sup>...*

All these signs point to an acceleration of the climate crisis, both in terms of frequency and intensity of events, as highlighted in the IPCC's Sixth Assessment Report<sup>2</sup>. Despite some new commitments from some states<sup>3</sup>, notably at the last COP26 in Glasgow<sup>4</sup>, initiatives often seem to come more from non-state actors, such as regions, cities, civil society organizations or companies<sup>5</sup>.

Among the latter, Fair Trade Organisations (FTOs) have a minor impact, given their small market share in overall world trade. Nevertheless, perhaps even more than conventional companies, they have the duty to set the example and to "do their share" in the fight against climate change.

## A FEW INITIATIVES FROM THE FAIR TRADE SECTOR

Despite its primarily social DNA, the sector is fortunately not starting from scratch. Many FTOs and platforms have more or less recently committed to the subject. Examples: WFTO's new Principle 10<sup>6</sup> and its "People and Planet" initiative<sup>7</sup>; the greening of the criteria of the Fairtrade International label and the development of "fair carbon credits"<sup>8</sup>; the multiplication of environmental impact studies; the development of labels combining fair trade and organic criteria (e.g. Bio Equitable in France, Biopartenaire, Naturland Fair); the launch of local fair trade initiatives<sup>9</sup>.

A number of awareness-raising campaigns linking climate justice to trade practices and policies have also been launched, for example "Commerce équitable et climat, même combat" in France<sup>10</sup>, "Fair trade and climate justice" in the UK<sup>11</sup>, or more recently, "Climate justice: let's do it fair" by a consortium of FTOs at European level<sup>12</sup>.

Despite these various initiatives, the level of knowledge of many FTOs about their climate impact is quite low, let alone their overall environmental impact. Indeed, there is clearly a lack of data in the scientific literature, with very few references to studies specific to Fair Trade<sup>13</sup>. However, a few FTOs have undertaken to measure more precisely the carbon footprint (see box) of their activities and/or supply chains. Examples: Oxfam Intermon in Spain<sup>14</sup>, GEPA in Germany, Seepje in the Netherlands<sup>15</sup>, Oxfam Fair Trade<sup>16</sup> ou Oxfam-Magasins du monde<sup>17</sup> in Belgium<sup>18</sup>.

1 RTBF. 07/07/2022. Juin 2022, 3e mois de juin le plus chaud jamais enregistré dans le monde, selon Copernicus.

2 IPCC. August 2021. Sixth Assessment Report.

3 Examples include the US pledge to reduce its emissions by 50% by 2030 compared to 2005 or the UK's target of a 68% reduction by 2030, following commitments by China, Japan and South Korea to become carbon neutral by 2050 (2060 for China). India made its first commitment in Glasgow: it is aiming for carbon neutrality by 2070, raising its targets for 2030. See also the EU's new 2030 target, which increases from -40% to -55% emissions, and the corresponding "Fit for 55" legislative package.

4 Among the commitments made by various coalitions of countries: the phase-out of coal between 2030 and 2040; the end of public funding for fossil fuels by the end of 2022; the end of deforestation by 2030; and the reduction of methane emissions by 30% between 2020 and 2030. However, these promises were made before the war in Ukraine and the subsequent energy crisis... Le Monde. 06/11/2021. COP26 : après un tourbillon d'annonces, la crédibilité des nouveaux engagements en question.

5 NewClimate Institute. 23/06/2021. Global climate action from cities, regions and businesses.

6 The content of Principle 10 has been revised in 2019 to be renamed "Climate crisis and protecting our planet". WFTO. 20/09/2019. Fair trade calls climate emergency, revises principles.

7 WFTO. 2019. Putting people & planet first is common-sense (our new initiative).

8 Fairtrade International. Carbon credits.

9 TDC. 08/10/2020. Le commerce équitable local belge et européen. See also the "Paysans du Nord" charter from Oxfam-Magasins du monde.

10 CEF. Commerce équitable et climat : même combat !

11 Fairtrade Foundation. Fair trade and climate justice.

12 EFTA. Climate justice: let's do it fair. Note that Oxfam-Magasins du monde's campaign on climate justice is part of this common campaign but has developed its own set of activities and tools, such as a magazine, a study, stories or podcasts. <https://omdm.be/campagnes/letsdoitfair/>.

13 An example of study identified : Fairtrade International. July 2018. Life cycle assessment cut roses.

14 Anthesis Lavola. 2020. Auditoria CO2 y desarrollo de un Plan de Acción Medioambiental para Oxfam Intermon [OES]. Informe de resultados de Auditoria de la Huella de Carbono de Oxfam Intermon 2010-2019.

15 Seepje. 08/04/2020. Himalayan supershells. Achieving carbon neutrality. Consultancy report by Utrecht University.

16 OFT. 2022. Planet friendly and socially just. Sustainability report 2021.

17 Ernst C. Décembre 2013. Pistes d'amélioration de l'impact environnemental d'Oxfam-Magasins du monde via un audit carbone.

18 Other organisations have in the past carried out more systematic LCAs (i.e. on a range of environmental criteria, not just climate) of products. See for example : Oxfam Fair Trade. 2010. Life cycle assessment of wine. & Artisans du Monde. Avril 2011. Pré-évaluation environnementale en cycle de vie d'une filière de confiture d'ananas élaborée au Laos et commercialisée en France. Réalisation Cemagraf.

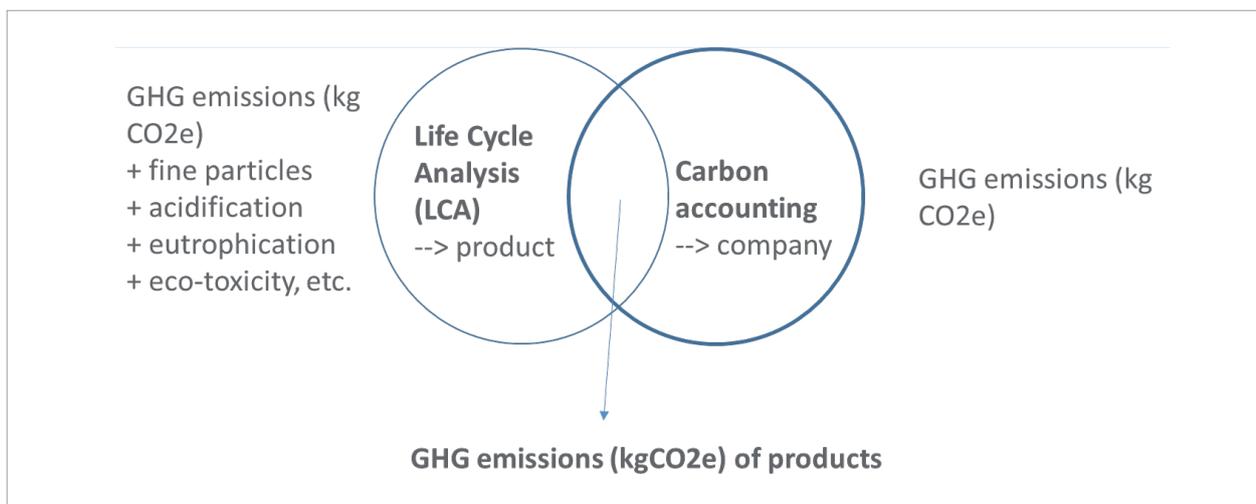
## CARBON FOOTPRINT OF PRODUCTS

The carbon footprint is defined as the amount of greenhouse gases (GHGs) released, directly and indirectly, into the atmosphere as a result of the activities of an individual, an organisation or the life cycle of a product. The carbon footprint is usually measured in tonnes of carbon dioxide equivalent (CO<sub>2</sub>e). Tonnes of CO<sub>2</sub>e are used to convert the emissions of all GHGs into a single unit of measurement, using the Global Warming Potential (GWP) of the different gases (e.g. over a period of 100 years, one tonne of methane is equivalent to 25 tonnes of CO<sub>2</sub>, 1 tonne of N<sub>2</sub>O to 300 tCO<sub>2</sub>e).

The “Bilan Carbone®” (carbon accounting) is a calculation methodology developed to measure the carbon footprint of an entity, for example an individual or a company<sup>19</sup>. It is therefore both a brand name (registered by the “Association Bilan Carbone”) and a tool intended for companies and organisations which want to measure their carbon footprint<sup>20</sup>.

A life cycle assessment (LCA) is an evaluation method that makes it possible to carry out an overall environmental assessment of a system (product, service, company or process), based on many different criteria and stages of its life cycle (from the extraction of raw materials to its end of life).

When calculating the carbon footprint of a product, one combines the Carbon Footprint and LCA methodologies, i.e. the emissions linked to the product are measured over its entire life cycle (and on a single environmental component, unlike multi-criteria LCAs) (see diagram).



## A MORE COMPLEX EQUATION IN THE HANDICRAFT SECTOR

Compared to food, data and studies are even more scarce in the handicraft and textile sectors, even for the so-called conventional sector (see bibliography below). The main reason for this is quite simple: the handicraft sector is characterised by a great diversity of raw materials and processes, which makes it even more difficult to calculate the footprints throughout different supply chains (which are often opaque and complex).

Moreover, handicrafts are most often produced in so-called southern countries, which often have less capacity in terms of control and/or traceability. More importantly, sales in the crafts sector are relatively low. As a result, the cost/benefit ratio of a carbon footprint study is less profitable than in the food sector for example.

<sup>19</sup> It was designed in 2004 by ADEME, the French Environment and Energy Management Agency. <https://bilans-ges.ademe.fr/>.  
<sup>20</sup> Projet Pangolin. Guide complet sur l’empreinte carbone. C’est quoi, comment la calculer et la réduire ?

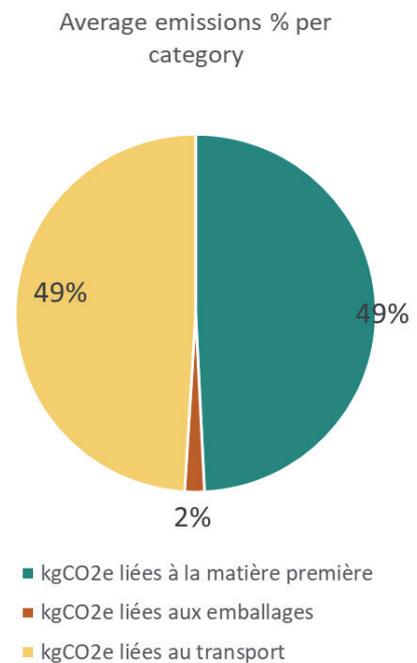
Despite these various obstacles, it is becoming increasingly difficult for FTOs to remain passive in this area. As mentioned above, they have to “do their share” and align their practices with their communication and campaigns. In addition, from a legal and commercial perspective, consumers and regulators will increasingly demand evidence of their commitment to reducing the carbon impact of the products they put on the market. This is particularly relevant when considering the potential risks associated with products derived from animal raw materials (e.g. leather products, e.g. high methane emissions from livestock).

## AVENUES OF ACTION FOR OXFAM-MAGASINS DU MONDE

Following various studies conducted over the past years<sup>21</sup>, more elaborate work to estimate the carbon footprint of 10 craft products<sup>22</sup> has recently been initiated by Oxfam-Magasins du Monde (OMdm). This was done with the help of the environmental agency Ecores, which used a combination of generic data and information provided by OMdm and its partners. On the basis of this work, various reflections and courses of action can already be outlined, in the three areas identified as the most emitting ones: transport (49% of total emissions of the 10 products analysed), raw materials (49%) and packaging (2%) (see graph besides).

A first observation, in line with the carbon assessment carried out in 2013, is the importance of products’ mode of transportation (49% of total emissions of all products analysed, see graph beside).

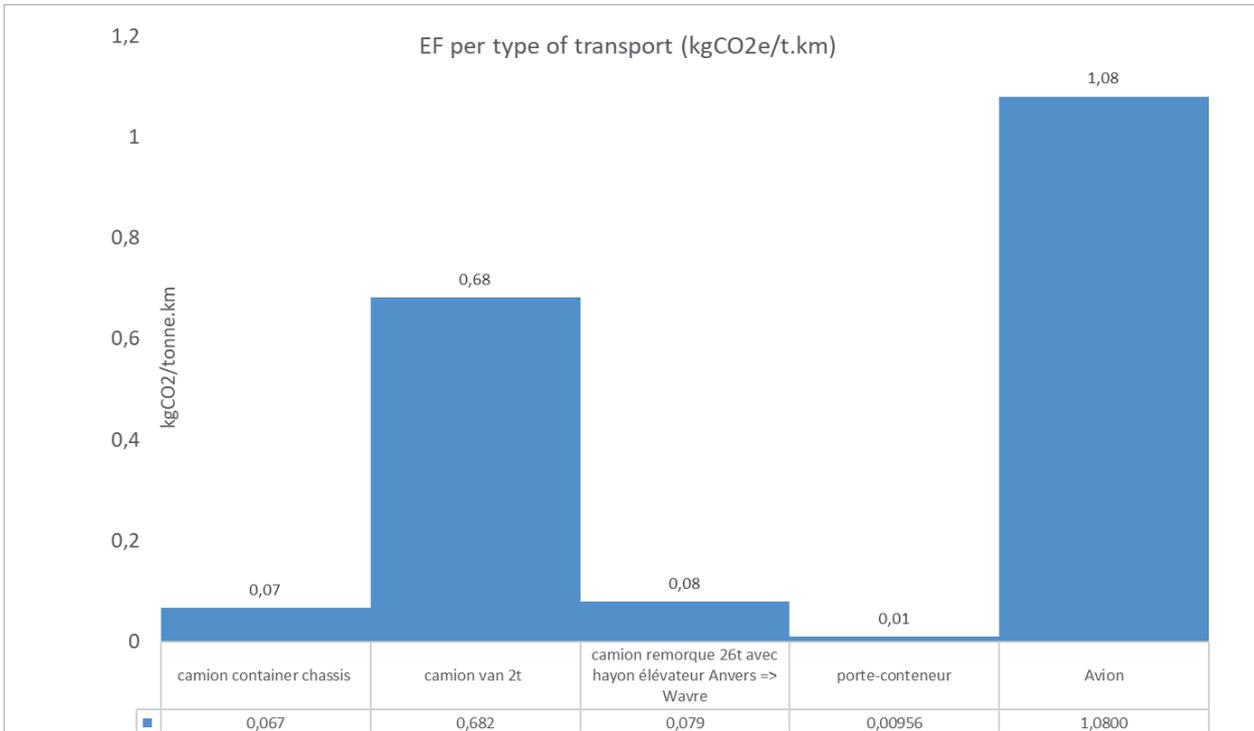
As the graph below shows, air transport has an emissions factor<sup>23</sup> (EF) 100 times greater than transport by container ship. For local transport, it is logical to see that transport over the last few kilometres (in a 2t van) emits the most (10 times more pollution per kg than a 26-44t semi-trailer). However, it is important to put these emission factors in perspective with the kilometres travelled (often more than 1000 kilometres for boat and plane, compared with only a few hundred kilometres by truck). The main conclusion is clear: for products still transported by air, it is urgent to find logistical and organisational solutions to make a shift to maritime transport.



21 See notably a carbon accounting conducted in 2013 or an internship which qualitatively assessed a few handicraft products: Plomteux A. December 2018. Fair Trade, Handicraft Production and the Environment: Environmental Impact of the Fair Trade Handicraft Production.

22 The 10 products analysed are: coconut bowl (Vietnam); shopping bag in jute (Bangladesh); watering can in recycled metal (India); book in cotton (Sri Lanka); solid shampoo made of oil (Thailand); carpet in recycled cotton (India); tableware in clay ceramic (India); duck toy in wood (Indonesia); bicycle bag made of recycled cement bags (Cambodia); scarf made of alpaca wool (Bolivia).

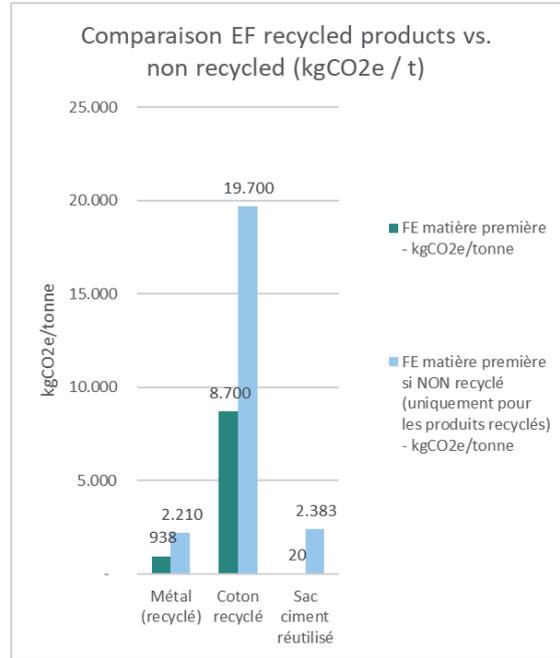
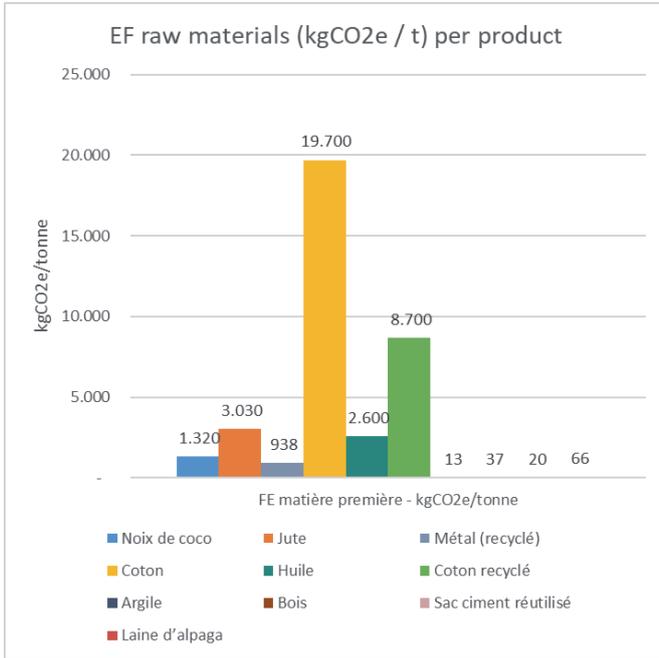
23 GHG emissions per tonne of product and per km travelled.



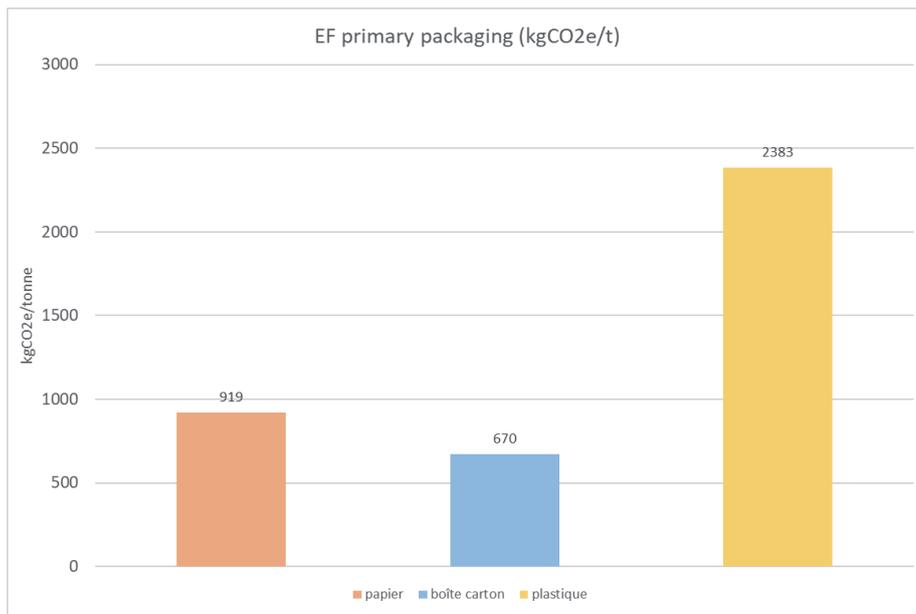
In terms of **raw materials**, the analysis of ten handicraft products shows significant differences in terms of emission factors. Conventional cotton is particularly emitting (19700 kg CO<sub>2</sub>e/t). This is mainly due to the inputs used for its cultivation, as well as the numerous [energy-intensive] processing stages (spinning, weaving, dyeing, etc.). However, this observation should be put into perspective, given that more and more synthetic fibres are used in the conventional textile industry and that their emissions per kg are on average three times higher than those of cotton<sup>24</sup>. The other raw materials, most of which are natural, have a much lower EF, including alpaca wool (although being an animal product).

It is also worth noting that the use of recycled raw materials can more or less halve the emission factors, whether for metal (watering can) or cotton (book). Finally, in the case of bicycle bags made from cement bags, the EF is reduced even further, as this is not recycling but reuse.

<sup>24</sup> Taking into account the fossil fuels used in their production, the average emissions of plastic fibres are equal to 11.9 kg CO<sub>2</sub>e per kg of fibre, compared to 4.7 kg for cotton. Ellen MacArthur Foundation. 2017. A new textiles economy: redesigning fashion's future. For example, a polyester shirt has twice the carbon footprint of a cotton shirt (5.5 kg CO<sub>2</sub>e vs. 2.1 kg CO<sub>2</sub>e). House of Commons. 19/02/2019. Fixing fashion : clothing consumption and sustainability.



The third and final category of analysis is the type of **primary packaging**<sup>25</sup>. Unsurprisingly, plastic has the highest emission factor (cf. the fossil raw material and the energy-intensive production process). This raw material is all the more to be avoided as it poses many other environmental pollution problems (cf. non-biodegradability or release of microplastics in the oceans, aspects not evaluated in this carbon footprint analysis). It should be noted that for the “bubble” plastics used to protect products from shocks during transport, recycled cardboard alternatives are already proposed by partners and used by OMDM.



<sup>25</sup> Primary packaging is the first layer in direct contact with the product, which it contains and protects. It serves as well as a medium for communication and information to consumers. It is distinguished from secondary packaging (such as cardboard boxes, used for protection and shipping, plus possibly the grouping of primary packaging) and tertiary packaging (for handling and transport, such as pallets with plastic film grouping boxes).

## CONCLUSIONS

This first analysis has provided a better overall understanding of the areas emitting carbon during the life cycle of a sample of 10 handicraft products. This already points to significant opportunities for improvement in terms of purchasing policies. Measuring on a wider selection of products will enable more precise courses of action to be set. This is an important step in the framework of OMDm 2030 strategic plan, which has identified as a major challenge “to include Transition in its operations and to reduce the negative impacts of its activities”<sup>26</sup>.

As Fair Trade products are mostly made by hand and from natural raw materials, one can assume that their carbon impact (and more broadly their environmental impact) is low compared to equivalent conventional products. However, this may not always be the case – as we have seen, certain raw materials<sup>27</sup> and modes of transportation are a major source of emissions – which justifies measuring it better and tackling this issue as soon as possible.

The main objective will initially be to make progress on the product selection process. More specifically, the idea will be to ensure that OMDm purchasers take greater account of environmental criteria in the selection of products offered by our partners<sup>28</sup>.

A second consecutive axis could be the development of a more global approach to eco-design of crafts within the OMDm staff<sup>29</sup>. In addition to improving the lifespan of products and reducing their environmental impact, this eco-design approach could have communicative and marketing benefits.

More systematic measurement of the carbon footprint of Fairtrade products, compared to their conventional counterparts, would also allow for more communication on low-emission (or even net-absorbing) products, such as those made from jute<sup>30</sup>.

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26 Oxfam-Magasins du monde. Décembre 2019. Plan stratégique 2030.

27 In particular in the textile supply chain, see: Veillard P. 06/12/2019. Impact environnemental du secteur textile : le dernier clou dans le cercueil?

28 Examples of possible approaches include: the development of a carbon footprint analysis grid; the training of product managers in the use of this grid (and more generally in eco-design issues); a webinar exchange with Southern partners supplying craft products.

29 This could involve, for example, the recruitment of a designer specialising in eco-design. Other avenues to be explored include developing better tools for exchanging product designs with Southern partners and setting up exchange programmes on eco-design with them.

30 PHWC. May 2006. Life cycle assessment of jute products.

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