Reducing the ecological footprint

3 novellas:

1. The flowing of water
2. Refuge
3. Rural wisdom

Ewout Storm van Leeuwen

This is a fantastic tale of how humans and nature can work together to manage the Earth. In this case, it is about water. The story takes place around a small area with a dry wadi, which can turn into a raging torrent during torrential rains. That is the outer side of the story.
What matters to the collaborating people in this fiction is that nature itself gets a say. Globally, this already happens here and there, but nature's interests are represented there by humans. It is called a «Parliament of Things».
Therein lies the crux: if you really talk to nature you are not communicating with things but with a multicoloured population of consciousnesses.
Nature beings are called those.
That's what nature peoples and, in our case, those who study anthroposophy know all about.

Then the story sweeps to a remote eco-village in the north-east of the Netherlands. They liberate not only themselves from the oppression of a failing government, they help their neighbours as well.

The third novella describes the visits of our heroes and the clever girls Ilonka and Stefanie to farmers who are inventing their own ways in the transition to sustainable agriculture.

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The first part of this modest trilogy is written in the form of a dramatized manual for dealing with nature beings[1].
At Forge Neuve, two reservoirs with buildings and forest in the Vosges Mountains, part of the ecological community Ecolonie, work has been underway since 2020 to develop a form of concrete communication between humans and nature beings called “Language and Sign.”

The second part was written for and inspired by my late friend Luc Sala. The trigger was starting a residential, off grid community in East Groningen.
“What if...” was the question to which we formulated answers from a “worst case scenario. The project did not materialize, but the dystopian story *Refugium* had meanwhile seen the light of day.

Part 3 is a compilation of projects found on the Internet by agriculturists who devised their own transition. It is captured in a series of fictional interviews by the same individuals who starred in Part 2 in the lead roles.

Nature beings is an umbrella term for the entire kaleidoscope of elemental beings, guardian spirits, elementals, fauns, deva’s, goblins, gnomes, sylphs, dryads, naiads, nixes, pixies, leprechauns, garden fairies, flower fairies, landscape angels, salamanders, muses, creatures of decay and the like.

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1. The flowing of water

Foreword

A 'Parliament of beings'?
Certainly sounds strange to you?
I've never heard of it.
That's why it can exist. Let me explain it to you. To begin with, all life takes place in a thin shell around the planet: the biosphere or what is called Gaia, the living planet.
So what?
All life takes place in very specific biotopes per species and subspecies. Different species can share a biotope; then we speak of an ecosystem.
I haven't heard anything new yet.
A system can be seen as the interactions – the relationships – between the elements in that system: earth, water, air and fire, and the living actors in it: microorganisms, worms, plants, insects, fish, birds, animals, humans and what is in between.
That's familiar to me. Tell me something new.
There is a global movement to give biotopes and ecosystems legal status so that they are no longer defenseless as loot.
Look, at least that means something.
That's why.
What?
A 'Parliament of beings'.

1. Opening ceremony

The château – essentially an inordinately large, 19th century villa with even older outbuildings – filled up with conference attendees during the afternoon. Students pitched their tents along the lower river ... they didn't have the money for a room full board.

Franco had his reservations about this dichotomy, which apparently was no different here than in the rest of society. He was used to working with a team of like-minded people who did not differ much in socioeconomic status. But maybe it wasn't so bad, maybe the hotel guests were as driven to find inventive solutions as the students.

His camper under the trees of the driveway was joined by company. Shiny luxury vehicles alternated with small vans, a converted fire truck, an army vehicle and a few tiny houses behind old fourwheeldrives, from which sometimes entire families emerged. Those modern nomads were the only convention attendees who had their children with them.

A three-way split, then, Franco thought smugly: this is where the establishment, students and modern nomads meet.

To his delight, he saw a familiar, garishly painted van with an even more garishly painted tiny house behind it turn into the beginning of the driveway. His friend Emil found a spot where his caravan stood horizontally and got out just as Franco reached him. The two hugged each other circumspectly and walked together to the square in front of the château, where more people had already gathered.

A circle formed and widened as more people with a cushion or folding chair sought a seat.

It was a motley crowd: lots of bare legs and shoulders, brightly colored skirts and shawls, hats against the sun, some young

mothers and fathers with babies and toddlers and a dozen heads with gray hair. Two children went around with a bucket of elder flower lemonade and glasses, at an outdoor tap water bottles were filled with the château's own spring water.

Franco thought it was time to start and stood in the middle; an expectant circle of silence grew larger and larger until even the last children's voices faded away and only sounds of wind and birds could be heard. And noisy crows in the high forest beyond.

'Welcome to the first congress that I would like to name the basin for which we want to create a management plan: la Ruisseau de Clarison, a wadi that empties into the Ardeche. This site was selected as the most suitable pilot by le Faculté de Géologie de l'Université de Clermont Ferrand.'

All eyes turned to the three students who raised their hands upon hearing their faculty.

'The name will be French and the plan will take shape along French law. We envisage the creation of a semi-governmental organization: l'Autorité du zone de chalandise de l'Ardèche, for short: l'Autorité Ardèche.'

The circle began to hum and repeat the name.

'I am Franco de Jong, Spanish/Dutch by birth, British by nationality, legal expert in Anglo-Saxon and Roman-Rhineland law, I've been married twice, three adult children and I have lived in the Netherlands for some time.'

A few people grinned at him; they probably knew more. He grinned back.

'As you hear, the language of communication will be English, since eight or nine nationalities are gathered here, not everyone of whom understands and speaks French.'

That, too, was met with assenting hum.

A young man stood up in the circle and asked in a clear voice: 'Why not start with this little river, the Maron? That was our original plan.'

'The intention is to create a water management model that can be applied everywhere, including arid areas. Hence the choice for the Ardèche region.'

'Is it going to be a computer program?'

'A little more, though. A program with predictive power will probably become the most important tool for formulating policy. Variables such as extreme drought, heavy downpours, wind, eroding land use or conserving land use, irrigation, habitation or not, afforestation or not, soil conditions, karst phenomena, you name it, will have to be entered into a model, a model that describes the river basin, but that can also calculate changes in variables. In addition, the management plan will have to include manuals and protocols for consultation, public participation, responsibilities of government agencies, budgeting and the like. There are people in our gathering who can say more about that.'

Franco nodded to a young scientist he had already met: he had his camper parked just in front of Franco's.

The young man stood up.

'I am Jean-Pierre, I am working with two doctoral students at the University of Clermont-Ferrand on a water management program in which landscape and hydrological modifications can be modeled for their effectiveness in preventing desiccation of the landscape or devastation caused by torrential floods.'

There was clapping for this sentence, which would later prove to be from the English summary of his dissertation. He bowed slightly and grinned.

'We want to test this model against reality and perfect it in

a river basin that experiences extreme drought and sudden floods. We don't need to go to North Africa for that, we can find that all along the Ardèche; models for less extreme and more populated areas can be derived from that, not the other way around.'

A young woman raised her hand. 'Then why don't we meet there?'

Franco replied: 'There was already a congress planned here, we joined that.'

'This place is central in Europe for most participants and can accommodate and feed our numbers,' one student explained.

Franco added: 'Along the Ardèche there are only campsites. The next meeting will probably be locally or nearby.' His gaze went around the circle to see who else wanted to comment.

A fashionable woman stood up.

'Is there any idea yet what such a management plan should entail? I am Francesca Bellini, professor of water management at the University of Bologna, and I answered the call because some of my students persuaded me, without a snippet of information, though. Why is this meeting so ad hoc?'

A student stood up. 'Originally this meeting was supposed to be about establishing a 'Parliament of Things,' ma'am. It was transformed at the last minute, if not hijacked, and expanded from a theoretical philosophical concept to an experiment with a concrete area as both object and subject.'

Franco saw the debate evolve from a question mark to an exclamation point. It was conducted mainly by a few students and university professors. The bright 'beautiful people' sufficed to listen and keep their children occupied.

At the leadership's request, the local boulanger had baked an extra load of organic bread and came to deliver his cargo in an old and noisy 2CV delivery van. The smell of the fresh bread

could not quite dispel the stench of the old vehicle's unfiltered exhaust fumes.

Franco raised his hands when everyone wanted to get up: 'Patience, people. There is bread enough for everyone.'

A few colorful young men and women began to cut the bread into manageable pieces and let their children hand them out.

Franco felt the impatience of the professionals in the circle growing and stood up.

'Dear people, a wealth of skill and knowledge has been gathered here today and there is a tremendous drive to use it for sustainable water management. What is so unique about this meeting? First, that for the first time a philosophical approach and a technical approach have to find each other. That requires thinking out of the box. Second, that philosophically and practically we want to give voice to the unheard and unseen entities at play.'

He was handed a piece of bread and a piece of cheese and sat down again, glancing around to see if wine was being served. Alas, it remained only water. At the same time, his ever alert mind noted that almost everyone present nodded thoughtfully at his last words.

That made sense, too. The kind of people who come to a call have a click with the message. So the message in the call had the right tone. Still, he had expected more skepticism, especially from the 'technical' people. But perhaps those kept quiet because they did not consider themselves competent in the field of nature beings. A good form of modesty.

'Franco.'

Mattheuz had stood up, his friend and professor of water management at the University of Münster.

'Even among my students,' ...he pointed in the circle, – I brought a few of them – there is a realization that we cannot

learn about a landscape such as a river basin solely on the basis of a 3D lidar map and measured data on water discharge. Do you see a watershed area as an entity?'

'What do you mean by that word?' They played the ball to each other more often.

'A whole that is greater than the sum of its parts?'

'That sure, but why are you pinning your question?'

Mattheuz looked around appraisingly.

'Do you see that a landscape has some kind of consciousness?'

'Certainly. It's up to us to engage in communication with that.'

So, the kickoff was done. In that one sentence, Franco had made explicit what had been floating around under the table for ages that no one wanted to commit to.

Mattheuz grinned. 'You can explain that to me.'

'That's one of the goals of this meeting.'

A young man stood up, a Dutchman who was one of the initiators of this conference.

'You know that all over the world students and scientists are working to give 'parliaments of things' a scientifically based underlying structure, form and legal status. You are now saying in so many words that landscapes and seascapes also have, or should have a voice of their own? That ... that is beyond me.'

'It's not just about giving those "scapes" a legal status that can be taken into account politically and economically – by giving people who represent those entities a say,' interjected a Brazilian woman who had achieved world fame as a legal expert with her advocacy for legal protection of habitats of local people and animals. 'I came to this conference because I became curious about giving voice to entities that cannot speak.'

A beautifully dressed young woman stood up, a baby in a sling on her hip and a toddler at her skirts.

'That lack of understanding I, we, I should say, have already

seen in the entitlement. You talk about a parliament of things, but what you, and we here, are talking about are not things. They are conscious beings, although we cannot see them. For consciousness you cannot see, not ever, only the physical body is perceptible with our eyes. Your body of bones, flesh and blood and billions of microorganisms on and in you. Just as a landscape is made up of minerals, plants, animals and billions of insects, worms, fungi and bacteria.'

So! thought Franco. I couldn't have worded that better!

Confusion arose among the audience. The woman and the young man both remained standing.

'I am a simple engineer,' confessed that one. 'We work with physical standards, with physical forces and materials with their physical properties. I have to let this sink in. It's a totally new point of view for me.'

He sat down; the woman remained standing proudly.

An impasse fell. People looked questioningly at each other and whispered to their neighbors, but no one raised his or her voice.

The woman turned to Franco.

'My name is Melanie, I am a wandering wwoofer. My friend and I work where it's convenient on organic farms. Franco, I know you only by reputation. I have a question: why did you skip the introductory round and attunement?'

'I haven't, Melanie, we can switch to introductions and attunements any time.' He grinned. 'I couldn't resist the temptation to call everyone into question.' Serious again: 'This matter is so sensitive and incomprehensible to many people, if not controversial, that I thought it would be a good starting point to make all conference attendees equally insecure.'

She threw him a beautiful smile and sat down, gesturing that it was now up to him.

A group that clung together a little began to hum, one picked up an Indian drum, another her violin. Someone had grabbed neighbors' hands, it went around the circle, people began to sing along a familiar song of Native Americans.

Yes, Franco thought with emotion, Indians, sorry, natural peoples around the world know that everything is animate. We just need that realization here.

The resonance grew visibly and audibly. Gradually even the most skeptical closed the circle with their hands and started humming along.

The sound died away and silence solidified over them. Not even birds could be heard for a moment.

Emil stood up and raised his hands, listening. He darted around and looked around the circle.

'We have an audience,' he spoke softly, as if without air.

People looked mostly at his hands, which seemed to make gestures full of meaning, as if he were conjuring spirits. Franco dared to swear that everyone understood what he meant.

'They're listening in,' Emil continued in a dreamy tone. 'They are curious, which is extraordinary in itself, about what we are planning. They are curious about the connection we humans want to make between the knowledge of the nature beings of an area, and the skills of human engineers.'

Emil seemed to come out of a trance as he laughed out loud. 'Do you know that earth beings have assisted engineers and artists with knowledge of minerals, metals, rocks, bearing and geology, that air beings have given us aerodynamics and meteorology, that water beings have assisted engineers in understanding water power, currents, tides? And that fire beings have given us muses, the art of mineral smelting, blacksmithing, glass making, ceramics, composting.... the list is endless. For from what they reveal to men, they themselves learn.'

Remaining silent, Franco could feel an underground surging enthusiasm growing, an expectation, hope.

The silence was broken by a girl about ten years old.

'Can they talk to us?'

Emil knelt in front of her on one knee.

'They don't use words, Emily. They need people for that, just as they do for images. They can communicate feelings to us, though, to which we can create words and images. That's our gift.'

'Like the drawings we did with you?'

'Exactly. What we are going to try from now on is to find word and image to what they let us know. We can turn it into a kind of comic strip.'

'Yes, I remember. I kept making new drawings, remember?'

'We are going to do that again. We will also make pictures with words attached of what we think is important.'

Emil stood up and addressed the whole circle.

'Therefore, for the water management plan, we are going to try to draw the images they send us and at the same time the words with them that they whisper to us. So that we understand what they want to say and show us.'

'So direct representation instead of indirect?'

'How do you want to do that?' 'How do you know who you are speaking to?' 'How do others know you are giving voice without mixing your own opinion with it?' 'Giving voice to whom?' 'Is there even a who?'

The questions tumbled over each other.

Good questions, thought Franco, who had also stood.

The Italian professor then posed the question that resonated with many: 'What is the motivation for involving landscapes as conscious entities in people's decision-making? Leaving aside the question of what that consciousness would entail.'

Melanie replied before Franco could have said anything.

'The awareness of landscapes, biotopes, water, soil and trees is so great and there is so much knowledge concentrated in them.... we would be foolish not to honor the willingness of nature beings to cooperate with humans.'

'Francesca, do you know the distinction made by French philosopher Bruno Latour between 'humans' and 'earthlings'?'

'I have read some of his books, Franco, but I see the distinction he makes between 'humans' and 'earthlings' more as a political qualification than a philosophical concept. On the other hand, I can agree with assigning 'rights' to biotopes, ecological systems, landscapes, especially the right to integrity, right to be protected from degradation and disruption. But I also think this is more of a political issue, weighing between the immediate self-interest of operators and the interests of other users, even future generations. It is science, especially the collection of biological and ecological disciplines, that should provide the knowledge for this.'

Emil clapped his hands.

'Ms. Bellini, science, as you advocate, has long been the basis for environmental conservation and biodiversity protection. I was taught that back in physical geography classes in 1972. fifty years ago. Restoration of the ozone layer and today the attempts to reduce humanity's ecological footprint are the result of scientific research and urgent recommendations to politics and industry by scientists.'

'With you, about you and without you,' was shouted from the circle.

'That's the difference,' Emil hedged. 'To adapt the phrase of the French negotiator at the Peace of Utrecht in 1713 to the purpose of this meeting: we seek decision-making 'with you, about us and together' where the other side consists of repre-

sentatives of the invisible realms of nature beings and angels. In particular, the guardian spirits of land and sea entities.'

There was silence for a while after these passionate words, and Emil went back to his seat in the circle.

Francesca remained skeptical.

'I have heard your words; I can relate to them semantically but I nevertheless have no clear idea what we are talking about.'

Melanie stood up.

'It begins with acceptance that everything in the universe is consciousness and that what we can perceive with senses and measuring tools is a precipitation of consciousness.'

'That is a philosophical, if not religious principle.'

'Maybe, maybe its the ultimate reduction to quantum physics. It is simple: without that principle nothing is explainable. Oh, we can unravel mechanisms and find laws, but that is different from understanding.'

The Italian professor shook her head.

'What is grasping different from being able to handle it?'

Melanie laughed. 'You are right. I'll try another word. Resonate. What do you experience when you hear music? Your favorite music?'

Francesca nodded thoughtfully.

'I am beginning to grasp...' she laughed for a moment, 'to feel, I should say, what you mean. By experiencing music, resonating with it, the experience becomes much more than just receiving air vibrations. It is as if the composer and the performers, the musicians, were speaking directly to me – not verbally or in images – in vibrations, in frequencies.'

'Exactly. We also want to achieve that in and with the landscape for which we want to create a management plan,' Emil complemented. 'So locally, with the landscape and for the landscape.'

Franco interfered in the conversation again. He wanted to move toward a conclusion that all could share.

'That is our gift, the gift of man to create something new. Because what we learn there, we can eventually apply everywhere, if our model leaves enough room to introduce a multitude of variables.'

'Then you bring it back to the physical.'

Franco shook his head.

'A management plan as we advocate is a virtual instrument, a tool that, used wisely, can design feedback mechanisms for complex ecosystems that are no longer naturally present. Dampening feedbacks that allow the system itself to prevent a self augmenting oscillating in extreme situations. Something like that is a link between consciousness and physical. Using physical measures, an ecosystem, a system aware of itself, can handle physical extremes and continue to save sustainability itself.'

'You now describe a landscape in terms of a physical system with feedback mechanisms. Who determines the desired state? The farmer who wants to drain the land to be able to drive heavy equipment onto it as quickly as possible, or the landscape conservationist, the meadow bird conservationist, the water board that wants to prevent salt groundwater seeping up and has to maintain the water table? Sorry, this is typical of Holland, but it exemplifies my question.'

The young man sat down, stood up again and added: 'Sorry, my name is John, I studied hydraulic engineering in Delft and I work at a water board in the Netherlands.'

Francesca stood up. 'Configuration of our research area...' she laughed for a moment, '...physically and in terms of methodology, in the form of a system would also be my approach. Once all possible relationships are put in place in the form of formulas,

all kinds of data can be interrelated in any desired or observed quantity. The final situation is then the resultant of the data we input. Conversely, we can calculate from a desired end result back to the degree of feedback required to achieve it. Seasonal influences and changing land use also lead to predictable interventions this way.'

She had blushes on her cheeks. Franco hoped everyone had understood her.

A tanned, skinny man with a white crest stood up.

'Good afternoon, my name is Daoud Bulgakov, I am a professor of geology at the University of Kazan, the capital of Tatarstan. I do research on the use of fossil groundwater for farm irrigation. I hope to find inspiration for a sustainable form of water management here, because all our research indicates that where fossil groundwater is extracted, it can never be replenished because the pores in the sediment collapse when the water pressure drops.'

A student with an American accent stood up.

'I would like to join Professor Bulgakov. I am from California. The Central Valley has the greatest concentration of fruit growing and horticulture. Water for irrigation is already pumped from deeper than 500 meters. What the professor says about collapsing pores is easy to see there: the valley floor has already dropped more than four meters in some places.'

'I thought they even diverted a whole river to it?' asked another.

'That's true, but it's too little and the river flow is often very low due to the ongoing drought.'

'All that irrigation water evaporates, doesn't it? Why doesn't the climate there change toward moister and more rain?'

'The area lies in the rain shadow of the coastal mountains.'

'I don't mean that. The Central Valley with all those fruit trees

and green fields must put a tremendous amount of water vapor in the air. Is there any sign of that?'

From the looks of it, the American student was embarrassed. He looked around for support. He got that from the questioner.

'Or is it that the fruit trees and crops are too far apart to form a closed deck? Is there too much bare soil in between, radiating mostly heat?'

'I think so,' the American said with relief. 'At least a quarter to a third of the bottom is uncovered.'

Franco thought it was a good time to enter the discussion. 'It's well known that during heat waves in cities in the shade of really large, mature trees, the temperature is five to sometimes as much as 10 degrees lower than where the sun shines directly on the ground.'

'That again points out the importance of preserving mature trees. That is, trees older than a hundred years,' Emil complemented.

'And especially deciduous trees,' someone complemented. 'Conifers also evaporate in winter and they are incredibly flammable. So is eucalyptus, for that matter.'

It became silent in the square; the thoughts of individuals seemed to be moving in the same direction in a coordinated manner.

We are realizing a morphogenetic field of our own, Franco thought in surprise.